

HP ProLiant Essentials Rapid Deployment Pack—Linux Edition Installation Guide



June 2004 (Second Edition)
Part Number 347244-002
Product Version 1.10

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HP ProLiant Essentials Rapid Deployment Pack—Linux Edition Installation Guide

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About This Guide

This guide provides detailed information about installing the Rapid Deployment Pack—Linux Edition, configuring the Deployment Server and the provided scripted installation jobs and files, and upgrading to newer versions of software.

Audience Assumptions

To install and configure the Rapid Deployment Pack, it is assumed that you have knowledge of:

- Installing Linux®, either from CD or the network
- Basic Linux command line interface operations (for example, mounting and unmounting floppy and CD-ROM drives, creating directories, and copying files)
- Network infrastructure

To perform tasks after the installation is complete, it is assumed that you have knowledge of editing files within Linux and running scripts under Linux.

Related Documents

HP recommends reviewing the following documentation before reading this guide:

- *HP ProLiant Essentials Rapid Deployment Pack Planning Guide*
- *HP ProLiant Essentials Rapid Deployment Pack—Linux Edition Support Matrix*

HP recommends reviewing the following documentation after reading this guide:

- *HP ProLiant Essentials Rapid Deployment Pack—Linux Edition User Guide*

All of the documents can be found in PDF format at <http://www.hp.com/servers/rdp>, on the product CD at /pim-lds/docs, and at /opt/altiris/deployment/adlserver/docs on the Deployment Server.

Where to Go for Additional Help

Refer to the following sources for additional information about the Rapid Deployment Pack.

Online Resources

- HP ProLiant Essentials Rapid Deployment Pack website at <http://www.hp.com/servers/rdp>
- HP ProLiant Essentials Rapid Deployment Pack Knowledge Base at <http://www.hp.com/servers/rdp/kb>
- HP ProLiant Essentials Rapid Deployment Pack What's New at <http://www.hp.com/servers/rdp>
- ITRC User Forum "ProLiant Deployment & Provisioning" at <http://forums.itrc.hp.com>
- Altiris website at <http://www.altiris.com>

Telephone Numbers

For the name of your nearest HP authorized reseller:

- In the United States, call 1-800-345-1518.
- In Canada, call 1-800-263-5868.

For HP technical support:

- In the United States and Canada, call 1-800-652-6672.
- Outside the United States and Canada, refer to <http://www.hp.com>.

Overview

A license allows a server to be deployed and managed by the Altiris Deployment Server for Linux. One license is required for each server being managed. After a license is applied to a specific server, the license cannot be removed or transferred to another server.

A license file contains licenses for a predetermined number of servers. License files are applied without reference to the Rapid Deployment Pack version and are not specific to Rapid Deployment Pack—Windows Edition or Rapid Deployment Pack—Linux Edition, as long as the one license per server requirement is met.

Licensing Options

The Rapid Deployment Pack offers five license purchasing options:

- One-node license—Use this license to deploy and manage one server through the Deployment Server.
- 10-node license—Use this license to deploy and manage 10 servers through the Deployment Server.
- Flexible Quantity license—These kits are available to obtain an exact quantity of licenses in the purchase of a single software option kit.
- Activation Key Agreement—This option provides the ability to order a key in the quantity desired and for a specific time and purchase a license for each server deployed over time.
- Blade enclosure bundle—A bundle of eight or 20 licenses are available with a ProLiant BL server enclosure.

For more information about Flexible Quantity license and Activation Key Agreement options, refer to the ProLiant Essentials Licensing Options at <http://www.hp.com/servers/rdp>.

Obtaining Licenses

The following sections explain how to obtain evaluation or purchased licenses for your servers.

Evaluation Licenses

Two types of evaluation licenses are available for use:

- A 10-node, seven-day evaluation license is built into the Deployment Solution. No license file is required. The evaluation license can be applied during the Deployment Solution installation.
- A 10-node, 30-day evaluation license can be used and obtained by:
 - a. Accessing <http://www.hp.com/servers/rdp/eval>
 - b. Following the online instructions to complete the registration process (an evaluation license file will be e-mailed to you)

Purchased Licenses

To register your product and obtain your license file:

1. Locate the unique 20-character product registration number on the label **on the back** of the software packaging box. The registration number is in the form:

xxxxxx-xxxxxx-xxxxxx-xxxxxx

IMPORTANT: Keep your product registration number for future reference.

2. Access <http://www.hp.com/servers/rdp/register>.
3. Follow the online instructions to complete the registration process. A license file will be e-mailed to you.

Additional purchased licenses can be transferred or combined with already registered licenses. Refer to the instructions at <http://www.hp.com/servers/rdp/register>.

Applying a License File

The following sections explain how to apply evaluation or purchased licenses to your servers and how to add or replace existing licenses.

Applying License Files During a First-Time Installation

A 10-node, seven-day evaluation license is built into the Deployment Server. To apply this license, during the installation at the Altiris Deployment Server for Linux Configuration screen, press the **Enter** key when prompted to enter the License file path and name.

To apply a purchased or evaluation license file, during the installation at the Altiris Deployment Server for Linux Configuration screen, enter the license file path and name in the License file field.

To view the number of licensed nodes from the Web console, click **Help** on the Web console toolbar.

Applying License Files During an Upgrade Installation

To continue using your existing licenses after an upgrade, be sure to select **Upgrade** during the upgrade installation. If **Overwrite** is selected, you are prompted to enter a license file path and name in the License file field.

Adding Licenses to an Existing Installation

To apply additional purchased licenses to an existing installation, add the new license file to your Deployment Server:

1. Copy the license file to the `/opt/altiris/deployment/adlserver` directory.
2. Change directory to `/opt/altiris/deployment/adlserver`.
3. Use the Altiris license script to input the new file using the following command:

```
./license filename.lic --restart
```

where `filename.lic` is the name of the license file.

To view the number of licensed nodes from the Web console, click **Help** on the Web console toolbar.

Replacing Licenses in an Existing Installation

If you have previously purchased, returned, or transferred licenses and have obtained a new license file to replace your existing license file on the Deployment Server:

1. Copy the license file to the `/opt/altiris/deployment/adlserver` directory.
2. Change directory to `/opt/altiris/deployment/adlserver`.
3. Use the Altiris license script to input the new file using the following command:

```
./license filename.lic --replace --restart
```

where `filename` is the name of the license file.
4. When prompted, enter `Y` to replace all license Activation Keys.

To view the number of licensed nodes from the Web console, click **Help** on the Web console toolbar.

First-Time Installation

Deployment Infrastructure

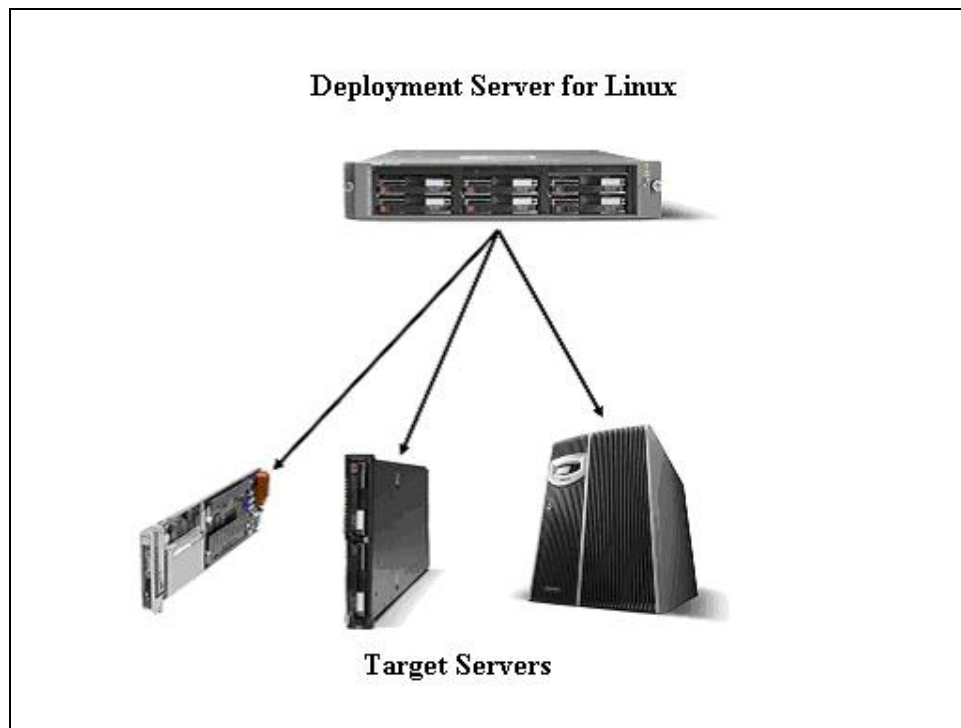
The following sections describe basic and multi-server deployment infrastructures and the components of each.

Basic Deployment Infrastructure

In a basic deployment infrastructure, all the Deployment Server components are installed on one Linux-based server. The Deployment Server components include:

- Altiris Deployment Server for Linux
 - Deployment Server for Linux
 - DHCP Server (Internet Software Consortium)
 - Deployment Server Database (PostgreSQL)
 - Deployment Server for Linux Web Console
 - Deployment Server Client Access Point
 - Altiris PXE Server
- ProLiant Integration Module for Linux Deployment Server
- ProLiant Integration Module for NFS

The following graphic depicts a basic deployment setup.



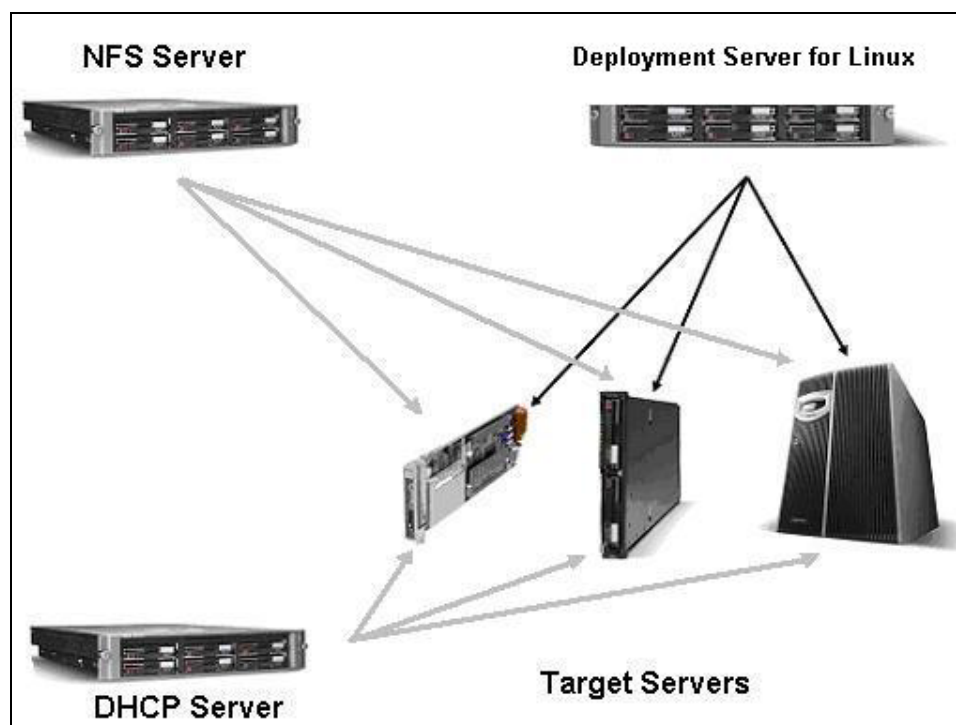
Multi-Server Deployment Infrastructure

In a multi-server deployment infrastructure, the Dynamic Host Configuration Protocol (DHCP) server or the NFS server can be separate from the Deployment Server. The following components are installed on the Deployment Server:

- Altiris Deployment Server for Linux
 - Deployment Server for Linux
 - Deployment Server Database (PostgreSQL)
 - Deployment Server for Linux Web Console
 - Deployment Server Client Access Point
 - Altiris PXE Server
- ProLiant Integration Module for Linux Deployment Server

The ProLiant Integration Module for NFS is installed on either the Deployment Server or a separate NFS server.

The following graphic depicts the multi-server deployment infrastructure.



Installation Requirements

This section describes the requirements to successfully install each component of the Rapid Deployment Pack.

Network Infrastructure Requirements

The Rapid Deployment Pack is designed to perform optimally with DHCP and PXE in the network environment. If PXE is used to perform remote deployment of servers, DHCP must be installed and accessible on the network before the Altiris Deployment Solution installation to ensure correct installation of PXE services. Boot diskettes can be used as an alternative to DHCP and PXE.

If you select to install DHCP on the Deployment Server, you must use the DHCP server provided as part of the Rapid Deployment Pack installation.

If you have an existing DHCP server that supports PXE, no additional installation steps are needed for PXE to function. Do not use the Rapid Deployment Pack installation to install DHCP on the separate server.

System Requirements

The following minimum system requirements for the deployment server, NFS server, and target servers must be met before installing the Rapid Deployment Pack. A separate NFS server is not required but is supported.

Linux Deployment Server

The deployment server hardware and network configuration must meet the following requirements:

- Intel® Pentium® III or higher processor
- At least 256 MB of RAM
- CD-ROM drive
- Network connection, configured with a static IP address and host name
- Current date and time using ROM-Based Setup Utility (RBSU)

The deployment server software and configuration must meet the following requirements:

- A supported Linux distribution installed (for supported distributions, refer to the *HP ProLiant Essentials Rapid Deployment Pack—Linux Edition Support Matrix*)
- ProLiant Support Pack for Linux installed to provide the latest supported network drivers for the Deployment Server (not for target installations)
- A minimum of 4 GB of available disk space on /opt, plus additional space to store any captured disk images or application installation files

NOTE: The default Red Hat Enterprise Linux 2.1 install places /opt in /, which is only 384 MB.

- A minimum of 500 MB of available disk space on /var if HP Systems Insight Manager is installed on the Linux Deployment Server

IMPORTANT: If Systems Insight Manager will be installed and running on the Linux Deployment Server, be sure to complete the Systems Insight Manager installation before starting the Linux Deployment Server installation. For details about integrating System Insight Manager with the Linux Deployment Server, refer to the Knowledge Base at <http://www.hp.com/servers/rdp/kb>.

- The SAMBA Server Message Block (SMB) server packages, minimum version 2.2.1, installed before the Rapid Deployment Pack installation

NOTE: An adequate version of SAMBA is included with the Red Hat Enterprise Linux 2.1 and UnitedLinux 1.0 distributions.

- PostgreSQL packages, version 7.2.2 or 7.4.0 (version 7.2.2 is installed during the Rapid Deployment Pack installation if the packages are not already installed on the server)
- Mozilla 1.0.1 and Netscape 6.1 (for Windows clients, Netscape 6.1 or Microsoft® Internet Explorer 5.5 or later)
- (Optional) X Window System package (xpdf) to view documentation in .pdf format

- If a firewall is installed on the server, the configuration must allow communication through the ports listed in Table 2-1:

Table 2-1: Open Ports for Deployment Server Firewall Configuration

Port	Function
TCP/402	Listens for client connections
UDP/402	Listens for server discovery packets
TCP/405	Listens for file transfer requests
TCP/5432	postgres server listens on this port
UDP/67	PXEServer when the Use DHCP option is set to true
UDP/4011	PXEServer
UDP/1759	PXEmtftp when Multicasting is enabled
UDP/69	tftp
TCP/1010	PXECfgServer
TCP/8080	Used by Tomcat

HP recommends having the following items available:

- A license file for purchased licenses or 30-day evaluation licenses (for information about licensing, refer to Chapter 1 of this guide)
- Red Hat Enterprise Linux distribution CD #1 (required for populating boot files if certain Red Hat Enterprise Linux jobs are selected)

For additional information about requirements for the Deployment Server, refer to the *Altiris Deployment Server 5.6 for Linux Product Guide*, which can be found at <http://www.hp.com/servers/rdp>.

Linux NFS Server

The Deployment Server can also be used as the NFS server, or a separate NFS server can be configured. The NFS server hardware and network configuration must meet the following requirements:

- CD-ROM drive
- Network connection, configured with a static IP address, with Domain Name System (DNS) available on the network if a host name will be used in the provided jobs

The NFS server software and configuration must meet the following requirements:

- If separate from the Deployment Server, a supported Linux distribution installed (for supported distributions, refer to the *HP ProLiant Essentials Rapid Deployment Pack—Linux Edition Support Matrix*)
- ProLiant Support Pack for Linux to provide the latest supported network drivers for the NFS server (not for target installations)
- At least 1.9 GB of available disk space on the /usr directory for each distribution installed from the Linux NFS server
- NFS software installed and configured (if a firewall is installed on the server, the configuration must allow incoming NFS connections, for example, UDP port 2049 for a typical NFS port)

For the Rapid Deployment Pack installation, HP recommends having Red Hat Linux or UnitedLinux Distribution CDs available.

Target Servers

The Rapid Deployment Pack supports ProLiant BL servers and select ProLiant ML/DL servers. For details on target server requirements, refer to the *HP ProLiant Essentials Rapid Deployment Pack—Linux Edition Support Matrix* for your version of Rapid Deployment Pack.

Basic Installation

This section provides directions for installing the Rapid Deployment Pack on your server. This basic installation includes the Altiris Deployment Server for Linux, ProLiant Integration Module for Linux Deployment Server, and ProLiant Integration Module for NFS installed on the same server. The Altiris Deployment Server for Linux includes installation for DHCP, PXE, database, Web console, and client access point components.

IMPORTANT: If Systems Insight Manager will be installed and running on the Linux Deployment Server, be sure to complete the Systems Insight Manager installation before starting the Linux Deployment Server installation. For details about integrating System Insight Manager with the Linux Deployment Server, refer to the Knowledge Base at <http://www.hp.com/servers/rdp/kb>

IMPORTANT: If Systems Insight Manager is installed and running on the server that will be the Deployment Server, execute the following command to stop the Systems Insight Manager service before starting the Rapid Deployment Pack installation:

```
/opt/mx/bin/mxstop
```

To install software from the Rapid Deployment Pack—Linux Edition CD on the deployment server:

1. Insert the Rapid Deployment Pack—Linux Edition CD into the intended deployment server.
2. Log in as `root` at the intended deployment server.

3. Mount the CD:

```
mount /mnt/cdrom (Red Hat)
```

or

```
mount /media/cdrom (UnitedLinux)
```

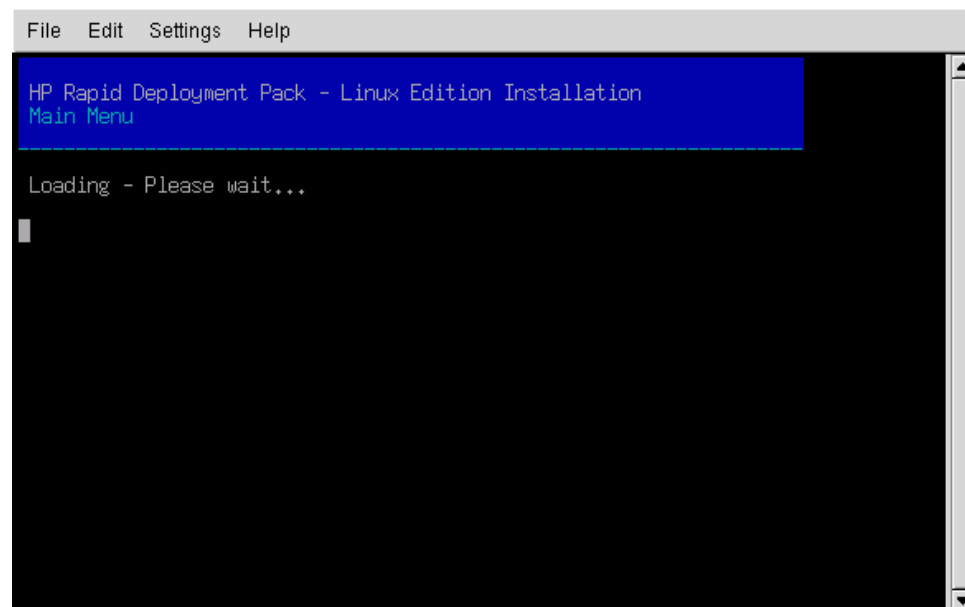
4. Run the setup script:

```
/mnt/cdrom/setup.sh (Red Hat)
```

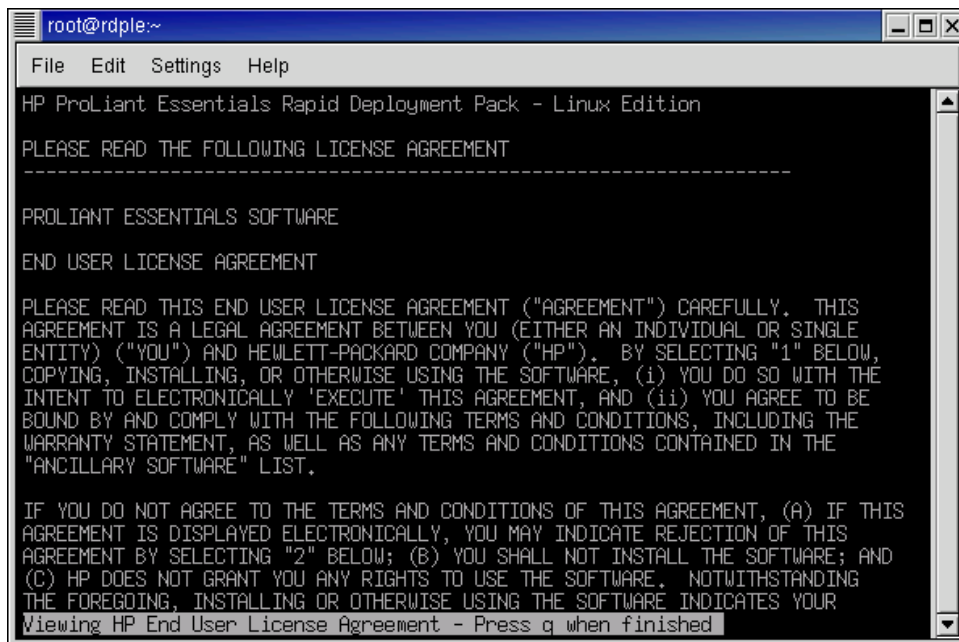
or

```
/media/cdrom/setup.sh (UnitedLinux)
```

NOTE: Do not change directory to the CD-ROM directory to run the setup script.

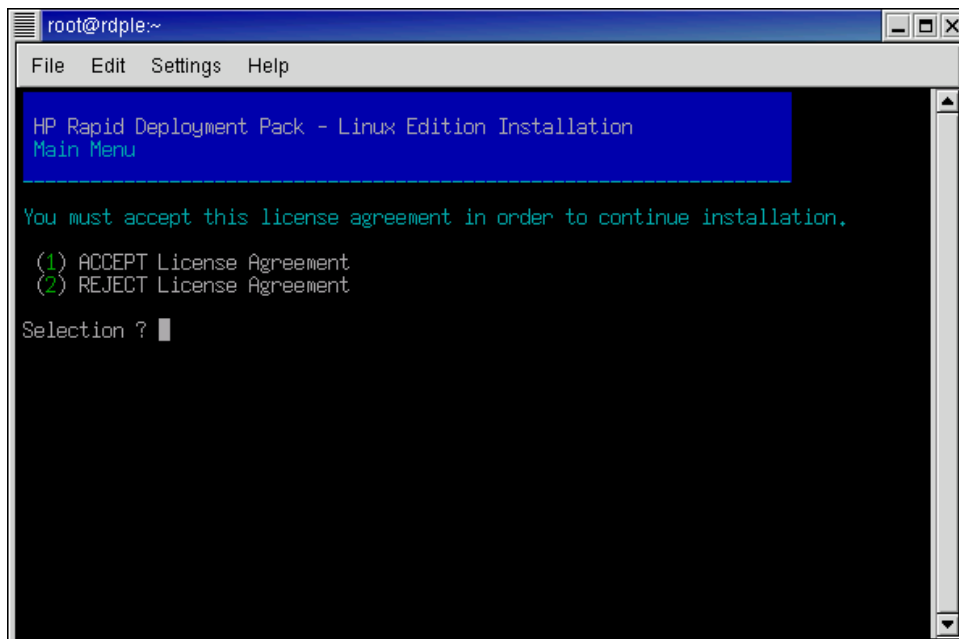


5. Read the license agreement displayed, and then enter `q`.



```
root@rdple:~
File Edit Settings Help
HP ProLiant Essentials Rapid Deployment Pack - Linux Edition
PLEASE READ THE FOLLOWING LICENSE AGREEMENT
-----
PROLIANT ESSENTIALS SOFTWARE
END USER LICENSE AGREEMENT
PLEASE READ THIS END USER LICENSE AGREEMENT ("AGREEMENT") CAREFULLY. THIS
AGREEMENT IS A LEGAL AGREEMENT BETWEEN YOU (EITHER AN INDIVIDUAL OR SINGLE
ENTITY) ("YOU") AND HEWLETT-PACKARD COMPANY ("HP"). BY SELECTING "1" BELOW,
COPYING, INSTALLING, OR OTHERWISE USING THE SOFTWARE, (i) YOU DO SO WITH THE
INTENT TO ELECTRONICALLY 'EXECUTE' THIS AGREEMENT, AND (ii) YOU AGREE TO BE
BOUND BY AND COMPLY WITH THE FOLLOWING TERMS AND CONDITIONS, INCLUDING THE
WARRANTY STATEMENT, AS WELL AS ANY TERMS AND CONDITIONS CONTAINED IN THE
"ANCILLARY SOFTWARE" LIST.
IF YOU DO NOT AGREE TO THE TERMS AND CONDITIONS OF THIS AGREEMENT, (A) IF THIS
AGREEMENT IS DISPLAYED ELECTRONICALLY, YOU MAY INDICATE REJECTION OF THIS
AGREEMENT BY SELECTING "2" BELOW; (B) YOU SHALL NOT INSTALL THE SOFTWARE; AND
(C) HP DOES NOT GRANT YOU ANY RIGHTS TO USE THE SOFTWARE. NOTWITHSTANDING
THE FOREGOING, INSTALLING OR OTHERWISE USING THE SOFTWARE INDICATES YOUR
Viewing HP End User License Agreement - Press q when finished
```

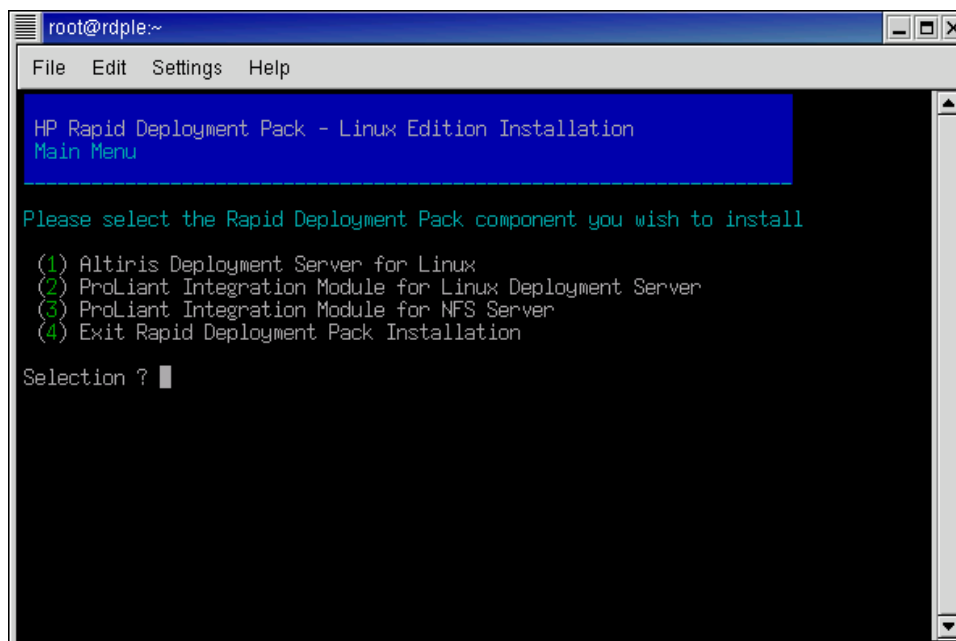
6. If you agree to the terms of the license agreement, enter `1` to accept the license agreement, and then press the **Enter** key.



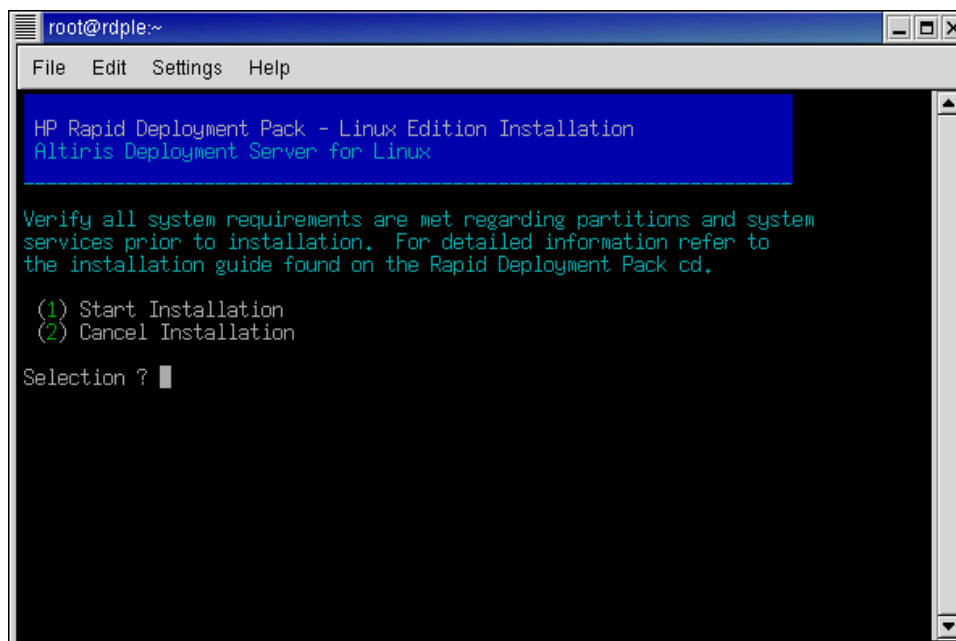
```
root@rdple:~
File Edit Settings Help
HP Rapid Deployment Pack - Linux Edition Installation
Main Menu
You must accept this license agreement in order to continue installation.
(1) ACCEPT License Agreement
(2) REJECT License Agreement
Selection ?
```

Altiris Deployment Server for Linux

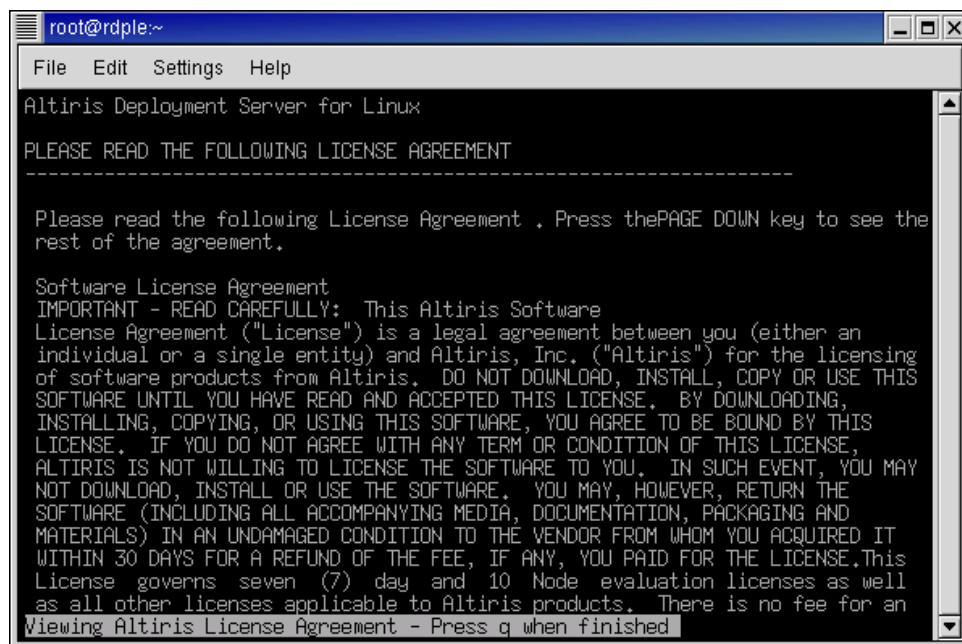
1. Enter 1 to select **Altiris Deployment Server for Linux** from the main menu, and then press the **Enter** key to begin the installation process.



2. Enter 1 to start the installation, and then press the **Enter** key. The Altiris Deployment Server for Linux components are installed after the license agreement is accepted.

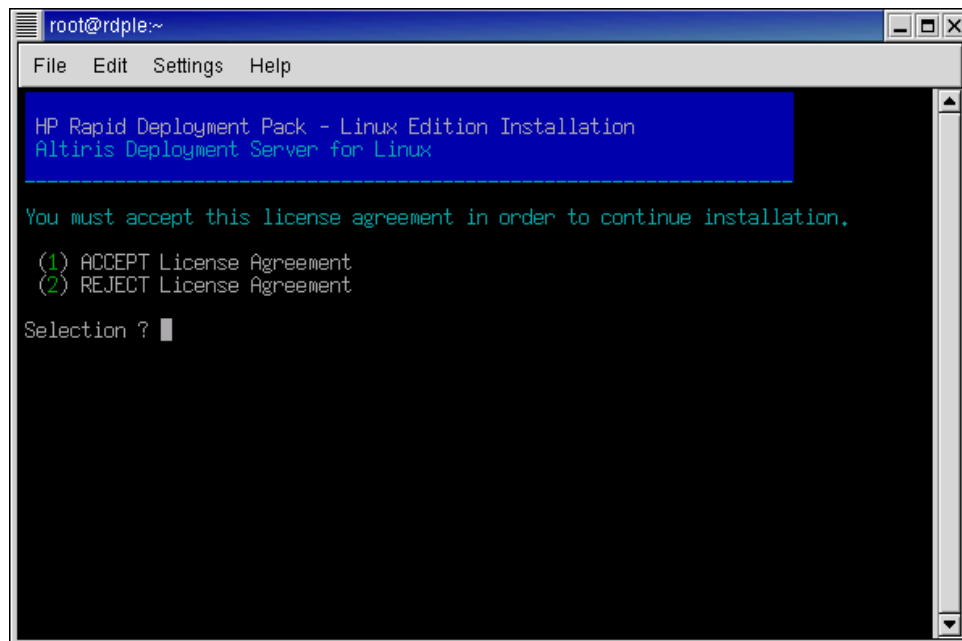


3. Read the license agreement displayed, and then enter `q`.



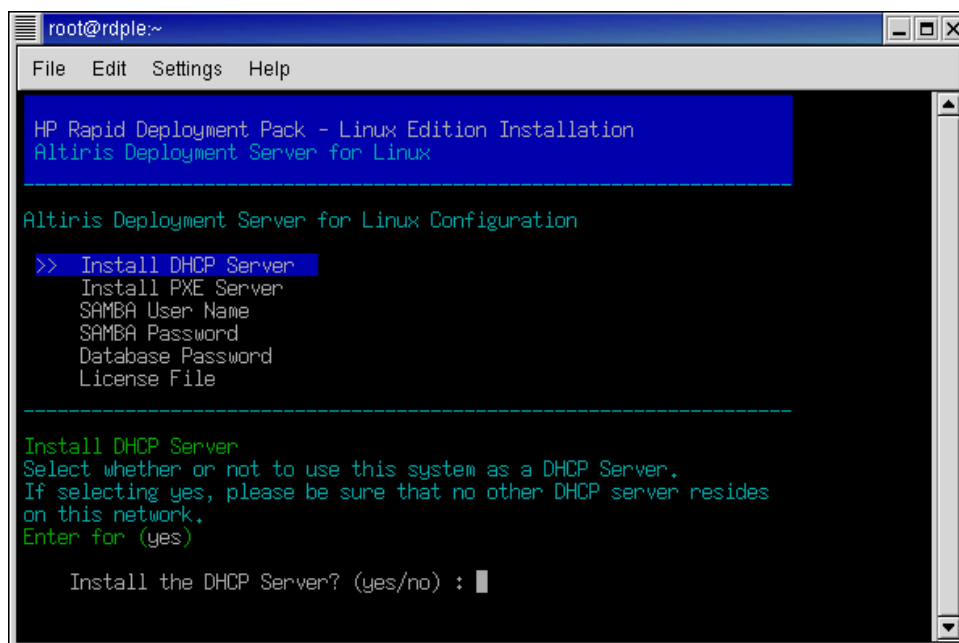
```
root@rdple:~  
File Edit Settings Help  
Altiris Deployment Server for Linux  
PLEASE READ THE FOLLOWING LICENSE AGREEMENT  
-----  
Please read the following License Agreement . Press thePAGE DOWN key to see the  
rest of the agreement.  
  
Software License Agreement  
IMPORTANT - READ CAREFULLY: This Altiris Software  
License Agreement ("License") is a legal agreement between you (either an  
individual or a single entity) and Altiris, Inc. ("Altiris") for the licensing  
of software products from Altiris. DO NOT DOWNLOAD, INSTALL, COPY OR USE THIS  
SOFTWARE UNTIL YOU HAVE READ AND ACCEPTED THIS LICENSE. BY DOWNLOADING,  
INSTALLING, COPYING, OR USING THIS SOFTWARE, YOU AGREE TO BE BOUND BY THIS  
LICENSE. IF YOU DO NOT AGREE WITH ANY TERM OR CONDITION OF THIS LICENSE,  
ALTIRIS IS NOT WILLING TO LICENSE THE SOFTWARE TO YOU. IN SUCH EVENT, YOU MAY  
NOT DOWNLOAD, INSTALL OR USE THE SOFTWARE. YOU MAY, HOWEVER, RETURN THE  
SOFTWARE (INCLUDING ALL ACCOMPANYING MEDIA, DOCUMENTATION, PACKAGING AND  
MATERIALS) IN AN UNDAMAGED CONDITION TO THE VENDOR FROM WHOM YOU ACQUIRED IT  
WITHIN 30 DAYS FOR A REFUND OF THE FEE, IF ANY, YOU PAID FOR THE LICENSE.This  
License governs seven (7) day and 10 Node evaluation licenses as well  
as all other licenses applicable to Altiris products. There is no fee for an  
Viewing Altiris License Agreement - Press q when finished
```

4. If you agree to the terms of the license agreement, enter `1` to accept the license agreement, and then press the **Enter** key.



```
root@rdple:~  
File Edit Settings Help  
HP Rapid Deployment Pack - Linux Edition Installation  
Altiris Deployment Server for Linux  
-----  
You must accept this license agreement in order to continue installation.  
  
(1) ACCEPT License Agreement  
(2) REJECT License Agreement  
  
Selection ?
```

5. At the Altiris Deployment Server for Linux Configuration screen, you are prompted to answer several questions regarding the DHCP and PXE servers, SAMBA user name and password, database password, and license file information. Press the **Enter** key to install the DHCP server.



The screenshot shows a terminal window titled "root@rdple:~" with a menu bar containing "File", "Edit", "Settings", and "Help". The main content area has a blue header with the text "HP Rapid Deployment Pack - Linux Edition Installation" and "Altiris Deployment Server for Linux". Below this, the text "Altiris Deployment Server for Linux Configuration" is displayed. A list of options is shown, with ">> Install DHCP Server" highlighted in blue. Other options include "Install PXE Server", "Samba User Name", "Samba Password", "Database Password", and "License File". A dashed line separates the options from the DHCP installation prompt. The prompt reads: "Install DHCP Server", "Select whether or not to use this system as a DHCP Server.", "If selecting yes, please be sure that no other DHCP server resides on this network.", "Enter for (yes)", and "Install the DHCP Server? (yes/no) :".

```
root@rdple:~
File Edit Settings Help

HP Rapid Deployment Pack - Linux Edition Installation
Altiris Deployment Server for Linux

Altiris Deployment Server for Linux Configuration

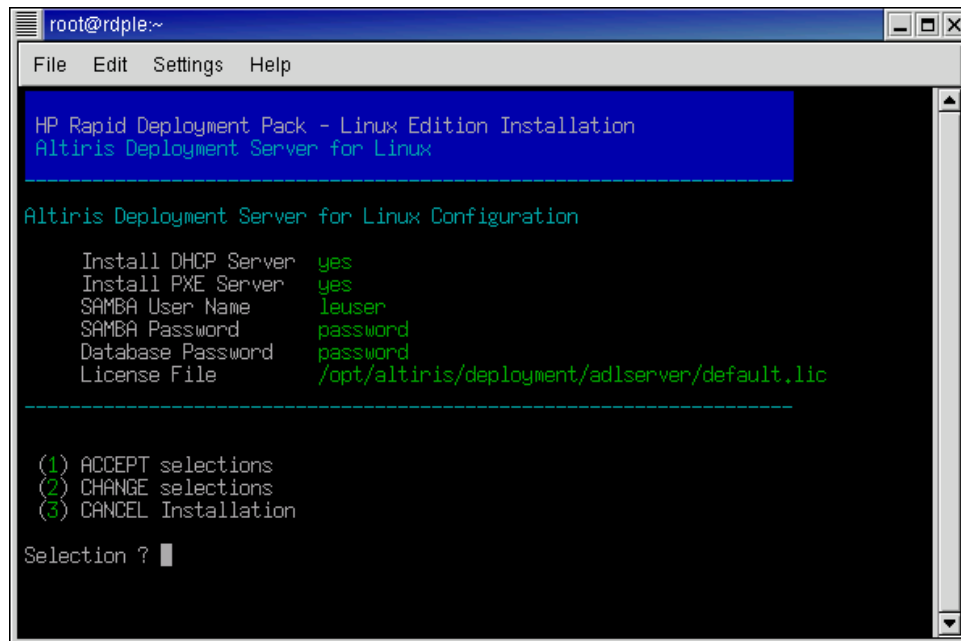
>> Install DHCP Server
   Install PXE Server
   Samba User Name
   Samba Password
   Database Password
   License File

-----

Install DHCP Server
Select whether or not to use this system as a DHCP Server.
If selecting yes, please be sure that no other DHCP server resides
on this network.
Enter for (yes)

Install the DHCP Server? (yes/no) : █
```

6. Press the **Enter** key to install the PXE server.
7. Enter a SAMBA user name, and then press the **Enter** key, or press the **Enter** key to use the default user name.
8. Enter a SAMBA password, and then press the **Enter** key.
9. Enter a database password, and then press the **Enter** key.
10. Either press the **Enter** key to select a free seven-day evaluation license, or enter the path and filename of the Altiris license file and press the **Enter** key. For more information about licensing, refer to Chapter 1 of this guide.
11. Enter 1 to **ACCEPT selections**, and then press the **Enter** key.



```
root@rdple:~
File Edit Settings Help

HP Rapid Deployment Pack - Linux Edition Installation
Altiris Deployment Server for Linux

-----
Altiris Deployment Server for Linux Configuration

Install DHCP Server  yes
Install PXE Server   yes
Samba User Name      leuser
Samba Password       password
Database Password    password
License File          /opt/altiris/deployment/adlserver/default.lic

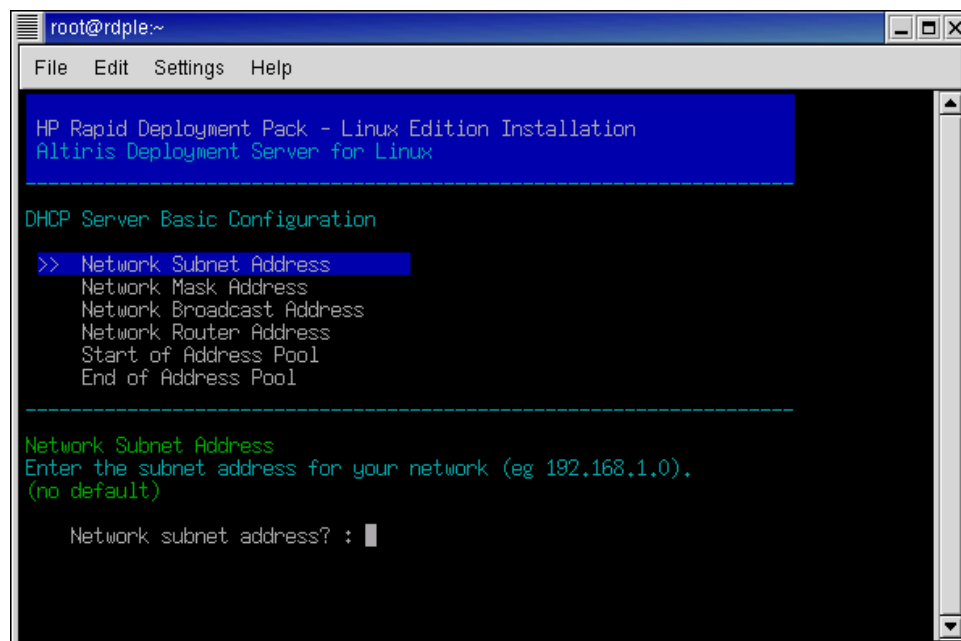
-----

(1) ACCEPT selections
(2) CHANGE selections
(3) CANCEL Installation

Selection ? █
```

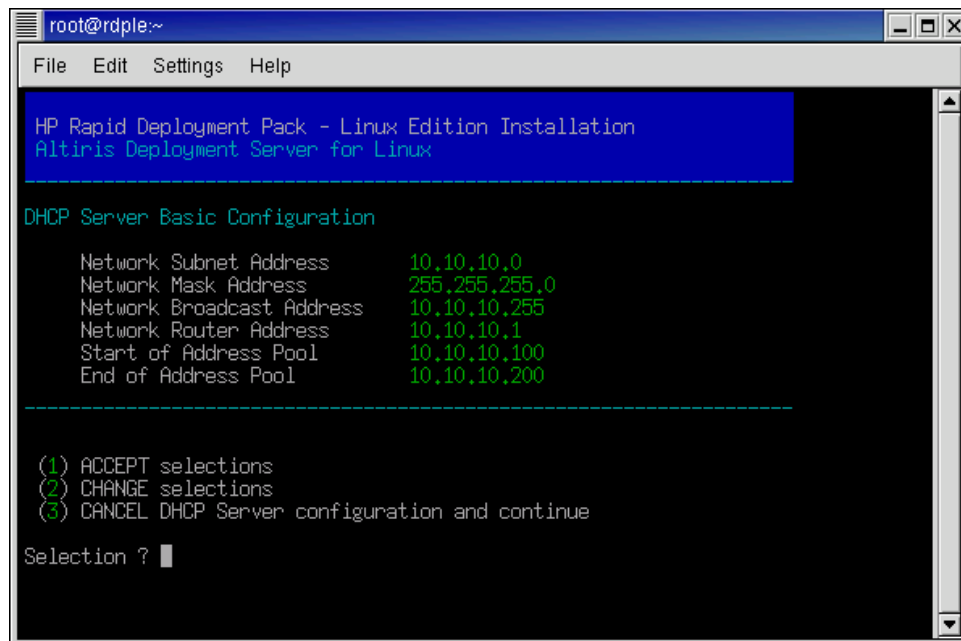
NOTE: Sample passwords are used in the figures. Be sure to designate your own passwords.

12. At the DHCP Server Basic Configuration screen, enter a Network Subnet Address, and then press the **Enter** key.



13. Enter the Network Mask Address, and then press the **Enter** key.
14. Enter the Network Broadcast Address, and then press the **Enter** key.
15. Enter the Network Router Address, and then press the **Enter** key. A valid server IP address must be entered.
16. Enter the Start of Address Pool IP address, and then press the **Enter** key.
17. Enter the End of Address Pool IP address, and then press the **Enter** key.

18. Enter 1 to **ACCEPT** selections and press the **Enter** key.



```
root@rdple:~
File Edit Settings Help

HP Rapid Deployment Pack - Linux Edition Installation
Altiris Deployment Server for Linux

-----

DHCP Server Basic Configuration

Network Subnet Address      10.10.10.0
Network Mask Address       255.255.255.0
Network Broadcast Address   10.10.10.255
Network Router Address      10.10.10.1
Start of Address Pool       10.10.10.100
End of Address Pool         10.10.10.200

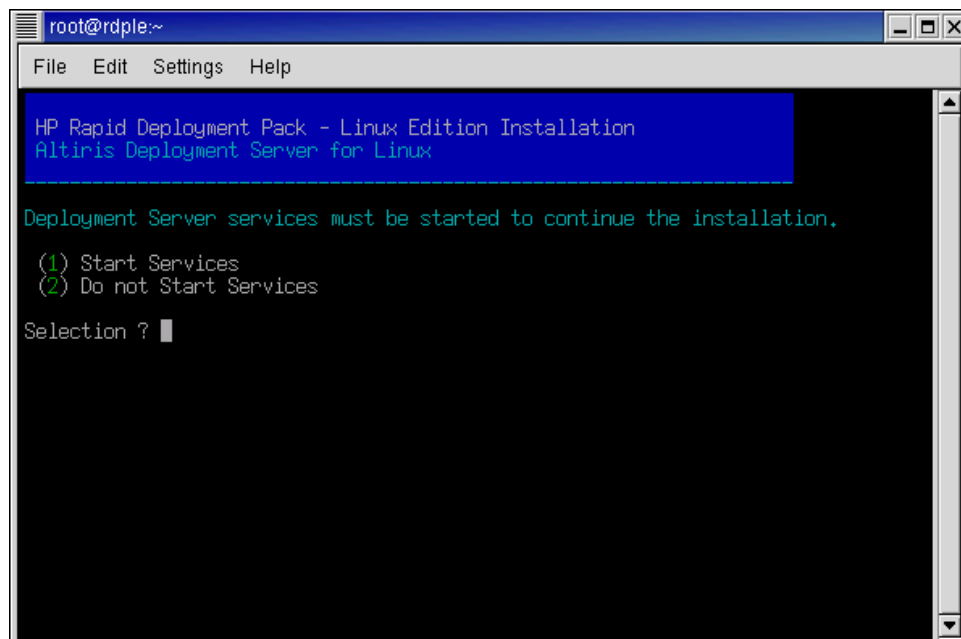
-----

(1) ACCEPT selections
(2) CHANGE selections
(3) CANCEL DHCP Server configuration and continue

Selection ? █
```

NOTE: Sample addresses are used in the figures. Be sure to designate your own addresses.

19. After the DHCP settings have been applied and verified, enter 1 to start the Deployment Server services, and then press the **Enter** key.



```
root@rdple:~
File Edit Settings Help

HP Rapid Deployment Pack - Linux Edition Installation
Altiris Deployment Server for Linux

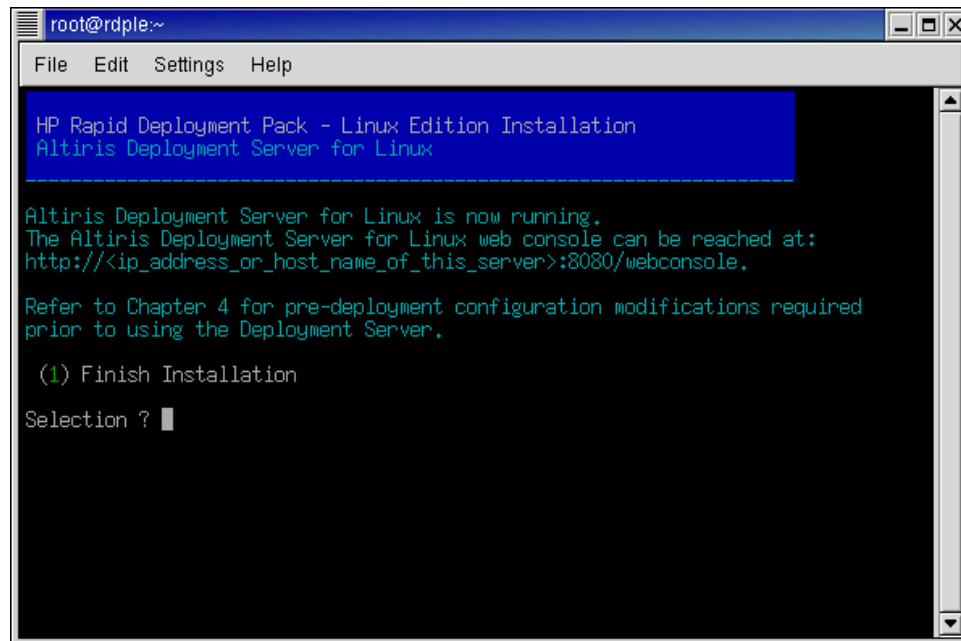
-----

Deployment Server services must be started to continue the installation.

(1) Start Services
(2) Do not Start Services

Selection ? █
```

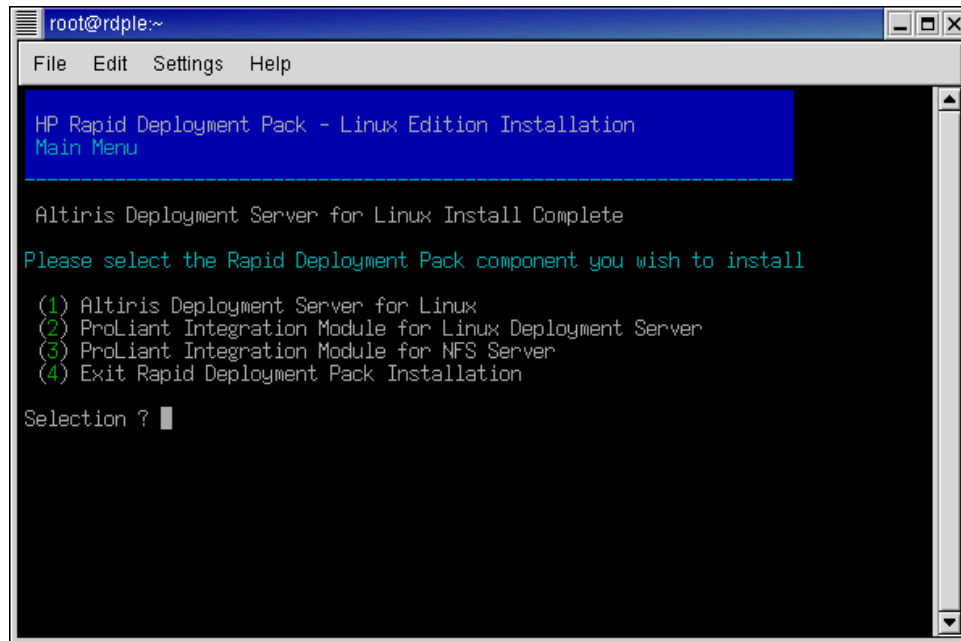

20. The following screen confirms that the services have started and provides information for accessing the Web console. Enter 1 to finish the installation, and then press the **Enter** key.



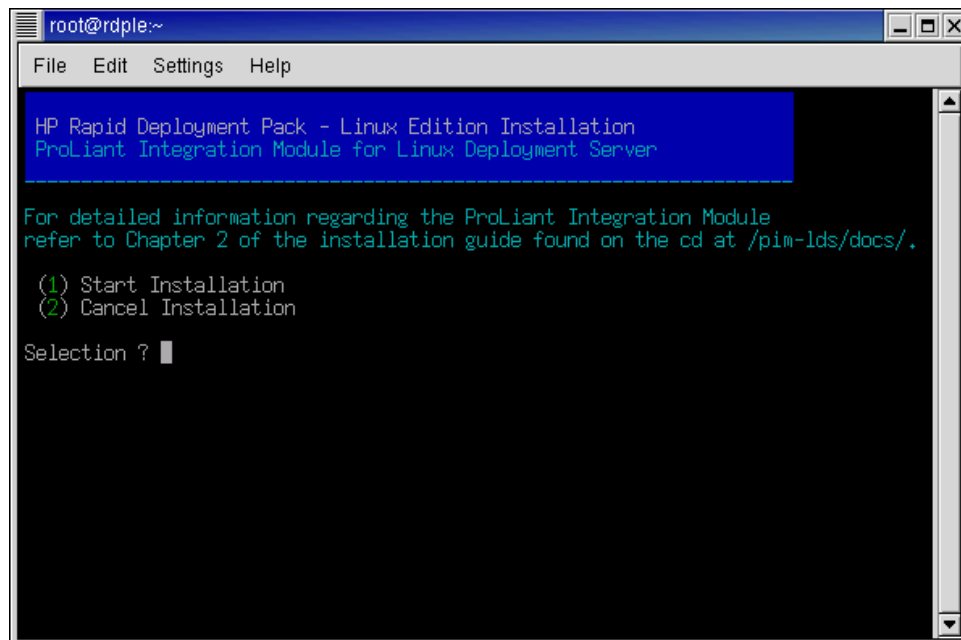
```
root@rdple:~  
File Edit Settings Help  
HP Rapid Deployment Pack - Linux Edition Installation  
Altiris Deployment Server for Linux  
  
Altiris Deployment Server for Linux is now running.  
The Altiris Deployment Server for Linux web console can be reached at:  
http://<ip_address_or_host_name_of_this_server>:8080/webconsole.  
  
Refer to Chapter 4 for pre-deployment configuration modifications required  
prior to using the Deployment Server.  
  
(1) Finish Installation  
Selection ? █
```

ProLiant Integration Module for Linux Deployment Server

1. At the Rapid Deployment Pack main menu, enter 2 to select **ProLiant Integration Module for Linux Deployment Server**, and then press the **Enter** key.



2. Enter 1 to start the installation, and then press the **Enter** key.



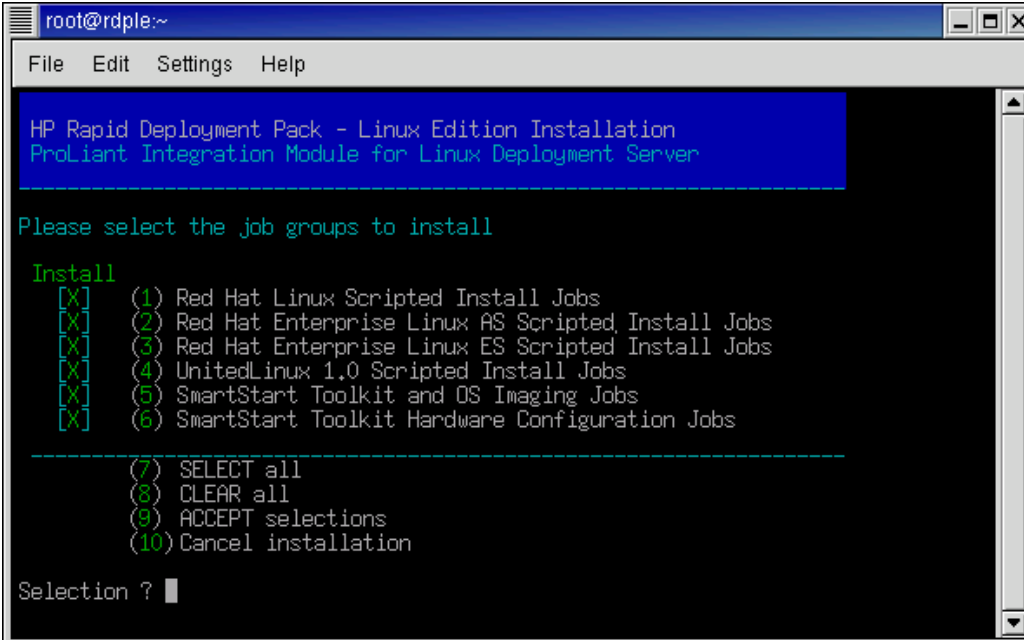
- After the ProLiant Integration Module for Linux Deployment Server files are copied, a list of available deployment jobs appear.

For each set of jobs to be installed, enter the corresponding selection number for the jobs, and then press the **Enter** key. To select all jobs, enter the appropriate number to **SELECT all**, and then press the **Enter** key.

The provided deployment jobs consist of:

- Red Hat and UnitedLinux Scripted Install Jobs—Enable a scripted hardware configuration and operating system installation of Red Hat Linux or UnitedLinux on a ProLiant server
- SmartStart Toolkit and OS Imaging Jobs—Capture a server hardware configuration and an image of a server hard drive, including the operating system and software applications, and deploy this hardware configuration and image to unconfigured ProLiant servers
- SmartStart Toolkit Hardware Configuration Jobs—Capture the hardware configuration of an existing server and deploy that configuration to other servers

NOTE: Selection numbers vary depending on the number of available distributions.



```

root@rdple:~
File Edit Settings Help

HP Rapid Deployment Pack - Linux Edition Installation
ProLiant Integration Module for Linux Deployment Server

Please select the job groups to install

Install
[X] (1) Red Hat Linux Scripted Install Jobs
[X] (2) Red Hat Enterprise Linux AS Scripted Install Jobs
[X] (3) Red Hat Enterprise Linux ES Scripted Install Jobs
[X] (4) UnitedLinux 1.0 Scripted Install Jobs
[X] (5) SmartStart Toolkit and OS Imaging Jobs
[X] (6) SmartStart Toolkit Hardware Configuration Jobs

-----
(7) SELECT all
(8) CLEAR all
(9) ACCEPT selections
(10) Cancel installation

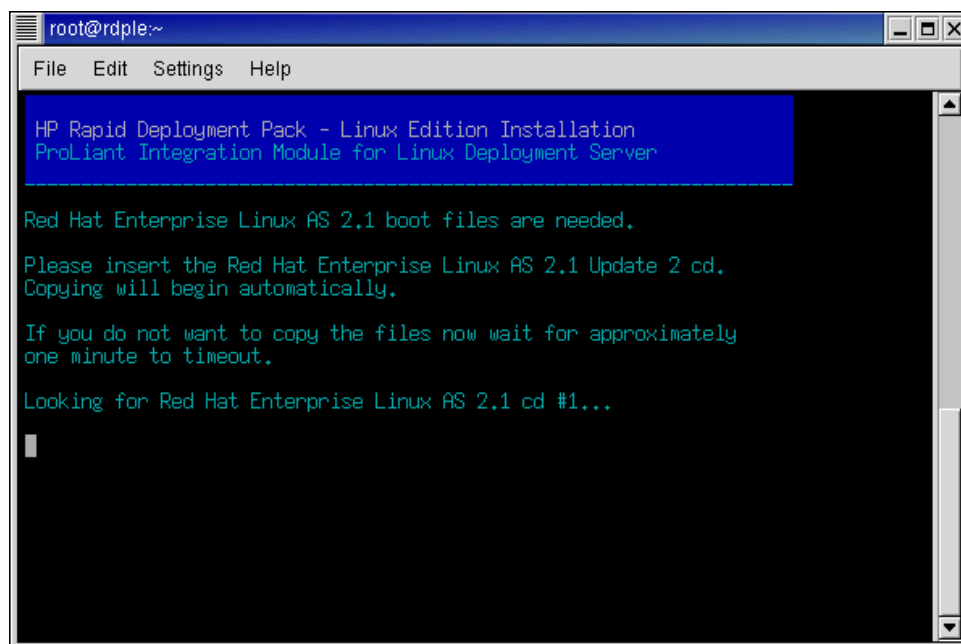
Selection ? █
  
```

- When you have selected all the job selections, enter the appropriate number to **ACCEPT selections**, and then press the **Enter** key. The selected jobs are imported. This might take several minutes depending on number of jobs selected.

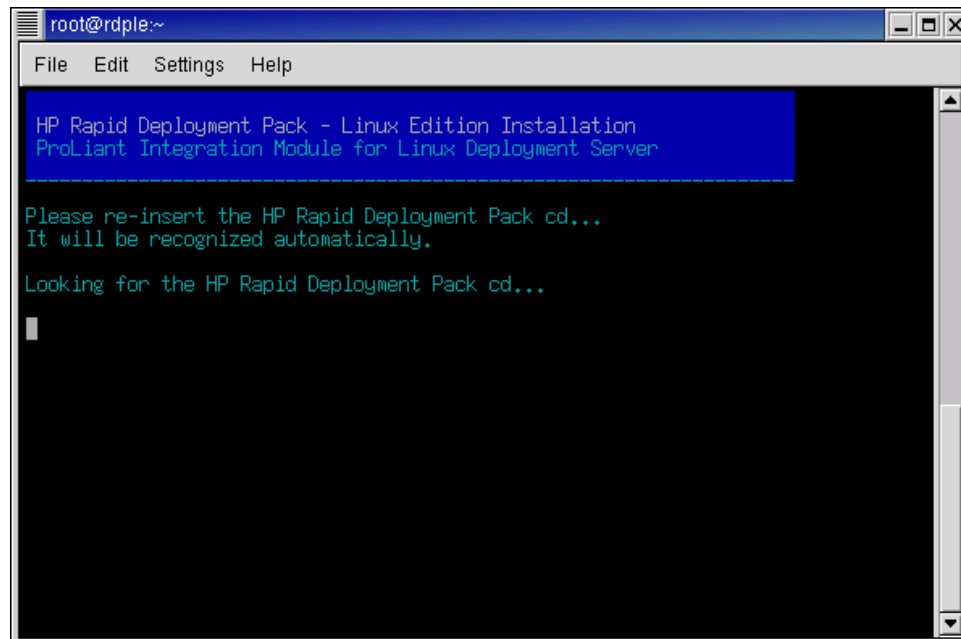
5. If you selected Red Hat Enterprise Linux scripted install jobs, you are prompted to copy the Red Hat Enterprise Linux boot files to the Deployment Server directory. Insert the designated Red Hat Enterprise Linux CD #1 when prompted. If the installation times out after one minute of looking for the CD, you are prompted to either retry or skip this step.

IMPORTANT: If you omit copying the Red Hat Enterprise Linux boot files at this time by selecting **Skip this step** after a time-out, manually install these files at a later time. For instructions, refer to Appendix A of this guide.

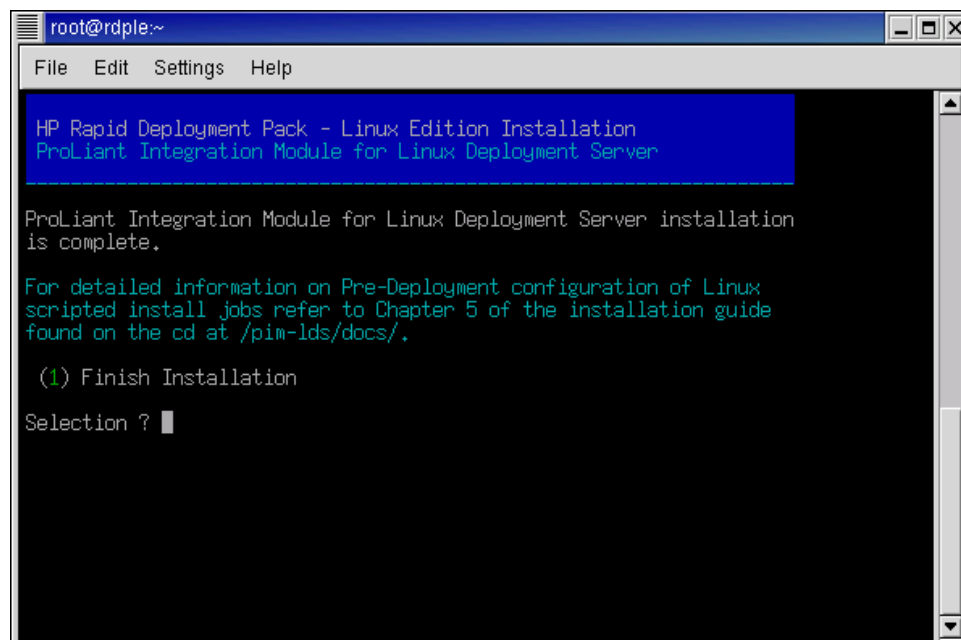
NOTE: Red Hat Enterprise Linux distributions CDs are installed on the NFS server. Use the same CD distribution during the installations of the Deployment Server and NFS server.



6. If you removed the Rapid Deployment Pack—Linux Edition CD, reinsert the CD in the CD-ROM drive when prompted.

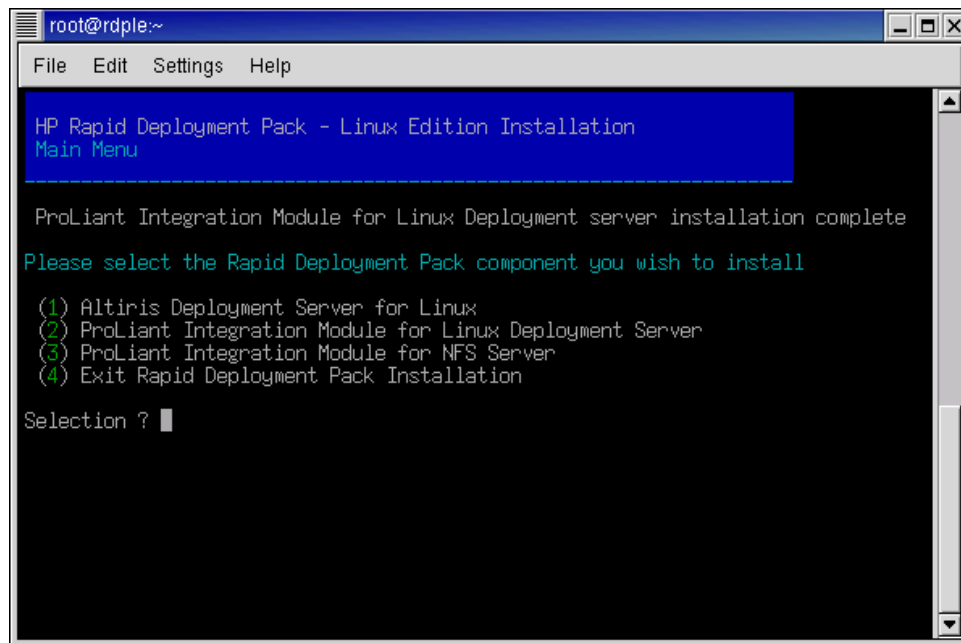


7. The following screen appears confirming that the ProLiant Integration Module for Linux Deployment Server installation is complete. Enter 1 and press the **Enter** key to finish the installation.

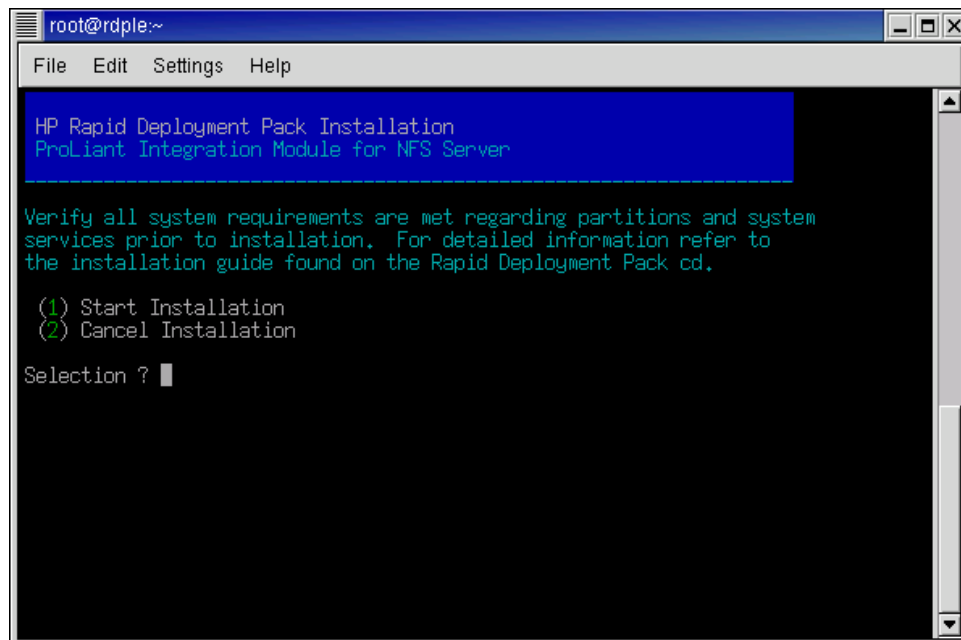


ProLiant Integration Module for NFS Server

1. At the Rapid Deployment Pack main menu, enter 3 to select **ProLiant Integration Module for NFS Server**, and then press the **Enter** key.



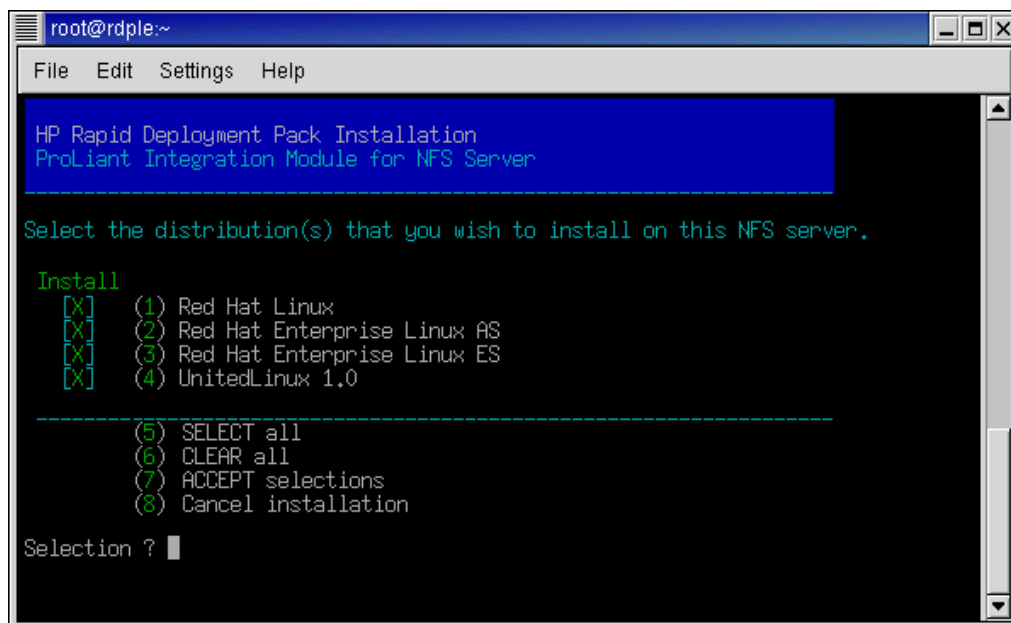
2. Enter 1 to start the installation, and then press the **Enter** key.



3. A list of the supported Linux distributions that can be deployed with Rapid Deployment Pack appears. Selecting a Linux distribution copies the ProLiant Support Pack files for that distribution and starts the Linux distribution CD query process to copy the Linux files onto the NFS server.

For each distribution to be installed, enter the corresponding selection number for the distribution, and then press the **Enter** key. To select all distributions, enter the appropriate number to **SELECT** all, and then press the **Enter** key.

NOTE: Selection numbers vary depending on the number of available distributions.



```
root@rdple:~
File Edit Settings Help

HP Rapid Deployment Pack Installation
ProLiant Integration Module for NFS Server

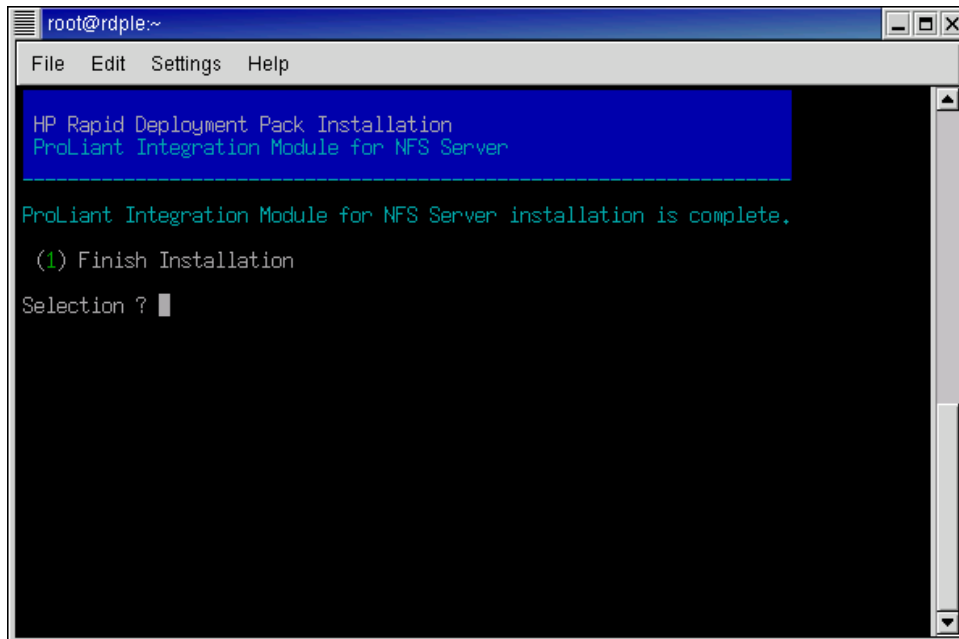
Select the distribution(s) that you wish to install on this NFS server.

Install
[X] (1) Red Hat Linux
[X] (2) Red Hat Enterprise Linux AS
[X] (3) Red Hat Enterprise Linux ES
[X] (4) UnitedLinux 1.0
-----
(5) SELECT all
(6) CLEAR all
(7) ACCEPT selections
(8) Cancel installation

Selection ?
```

4. When you have selected all the Linux distributions to be installed, enter the appropriate number to **ACCEPT** selections, and then press the **Enter** key. The file copy and CD query process begins.
5. After the ProLiant Support Pack files and distributions files are copied and you are prompted for the Rapid Deployment Pack—Linux Edition CD, place the CD in the CD-ROM drive.

6. The following screen confirms the ProLiant Integration Module for NFS Server installation is complete. Enter 1 to finish the installation, and then press the **Enter** key.



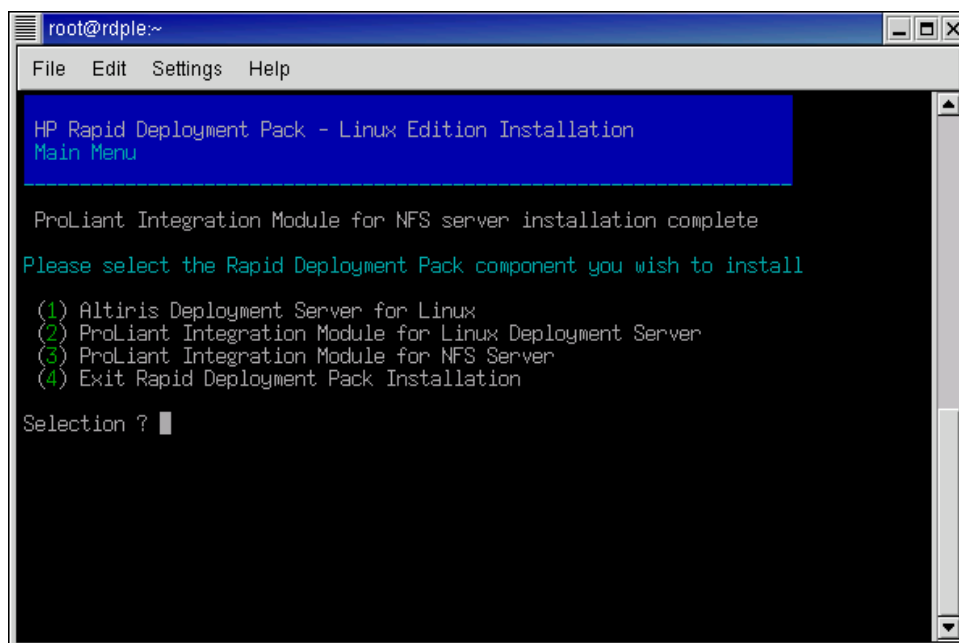
The screenshot shows a terminal window titled "root@rdple:~". The window has a menu bar with "File", "Edit", "Settings", and "Help". The terminal output is as follows:

```
HP Rapid Deployment Pack Installation
ProLiant Integration Module for NFS Server

ProLiant Integration Module for NFS Server installation is complete.
(1) Finish Installation
Selection ? █
```


Installation Complete

The Rapid Deployment Pack main menu appears. Enter 4 to exit the Rapid Deployment Pack installation, and then press the **Enter** key.



IMPORTANT: If the Systems Insight Manager service was previously stopped, restart the service at this time by executing the following command:

```
/opt/mx/bin/mxstart
```

The Deployment Server installation is complete. However, before attempting to use the Deployment Server and perform Linux distribution scripted installations, complete the procedures in Chapters 4 and 5 of this guide.

Multi-Server Installation

In performing a multi-server deployment infrastructure installation, both the DHCP Service and NFS Service can reside on servers other than the deployment server. The version of DHCP used must support the client classing and conditional behaviors required for PXE.

To use DHCP on a separate server:

- During the Altiris Deployment Server for Linux installation, enter `no` and press the **Enter** key when prompted to install the DHCP server.

To use a separate NFS server:

- During the Rapid Deployment Pack installation, do not proceed with the instructions in the “ProLiant Integration Module for NFS Server” section.
- On a separate server meeting the requirements listed in the “Linux NFS Server” section, mount the Rapid Deployment Pack CD-ROM and run the Deployment Server setup script, `setup.sh`. Follow the steps in the “ProLiant Integration Module for NFS Server” section of this chapter, entering 3 to select **ProLiant Integration Module for NFS Server** from the main menu to begin the ProLiant Integration Module for NFS Server installation.

Upgrading

IMPORTANT: Close any browsers connected to the Deployment Server through the Web console before attempting to upgrade the Rapid Deployment Pack software.

IMPORTANT: If you obtained your existing licenses before 11/20/2003, you should have received a new license file validating your licenses for an Altiris 6.0 software upgrade and providing 10-year Annual Upgrade Protection. Apply this new license file with the Altiris License Utility before upgrading to the Rapid Deployment Pack 1.10 or later. If you did not receive this license file, contact HP support before upgrading. Upgrading before applying a new license file can cause your existing licenses to become invalid, resulting in a reduced license count (possibly to zero).

IMPORTANT: To run Systems Insight Manager and Linux Deployment Server on the same system, several requirements must be met to ensure correct installation. HP recommends reinstalling the server operating system according to the system requirements listed in Chapter 2, installing Systems Insight Manager, and then installing the Rapid Deployment Pack using the procedures provided in Chapter 2. For details about integrating System Insight Manager with the Linux Deployment Server, refer to the Knowledge Base at <http://www.hp.com/servers/rdp/kb>.

To upgrade software currently installed on the Deployment Server:

1. Insert the Rapid Deployment Pack—Linux Edition CD into the Deployment Server.
2. Log in as `root` at the Deployment Server.
3. Mount the CD:

```
mount /mnt/cdrom (Red Hat)
```

or

```
mount /media/cdrom (UnitedLinux)
```

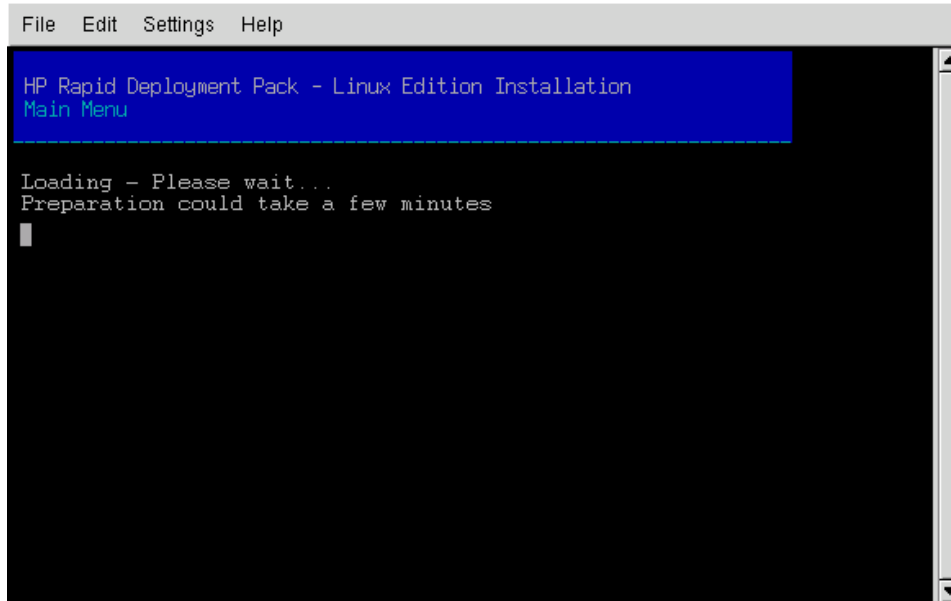
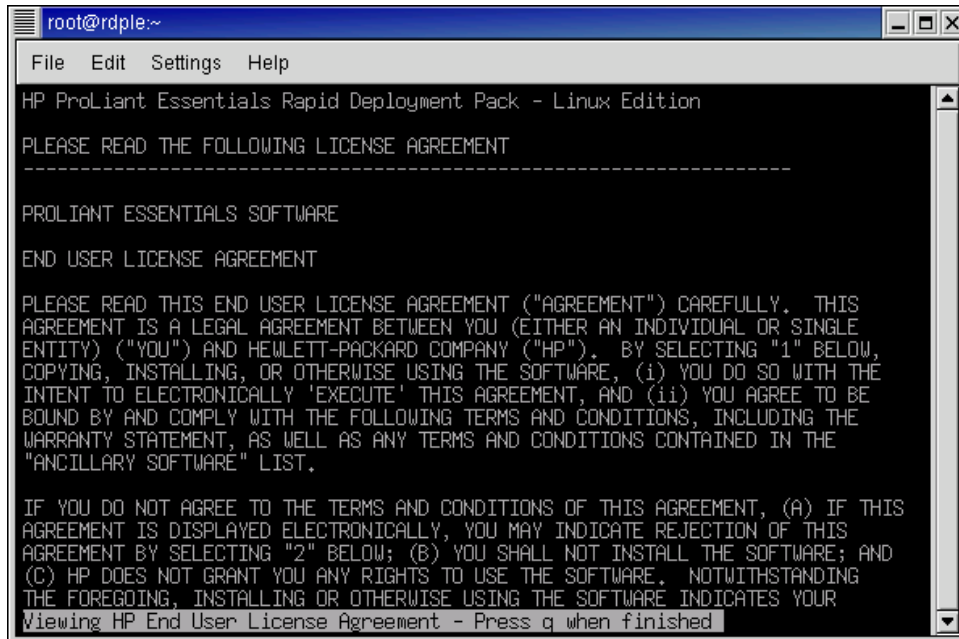
4. Run the setup script:

```
/mnt/cdrom/setup.sh (Red Hat)
```

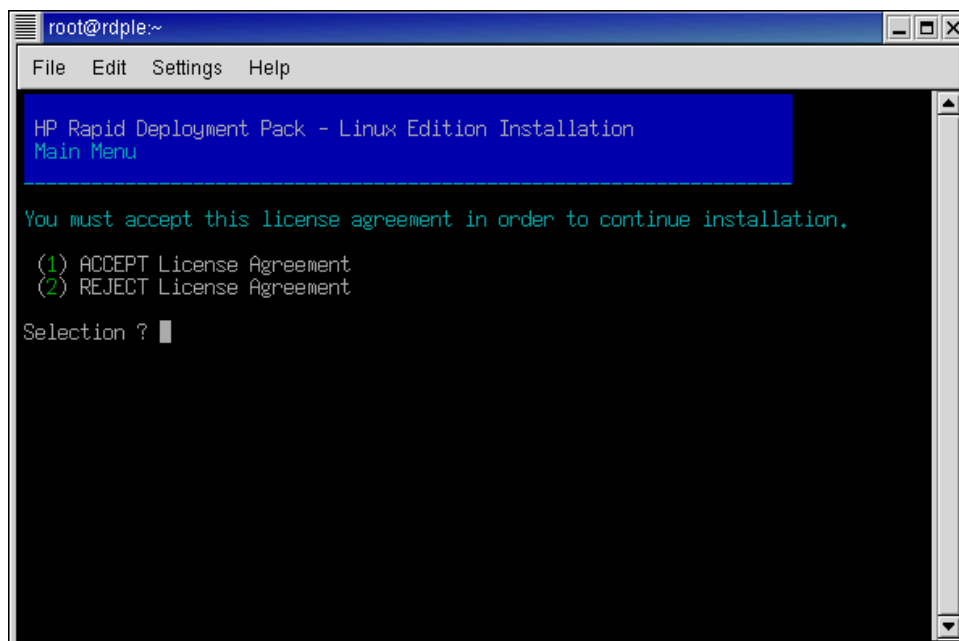
or

```
/media/cdrom/setup.sh (UnitedLinux)
```

NOTE: Do not change the directory to the CD-ROM directory to run the setup script.

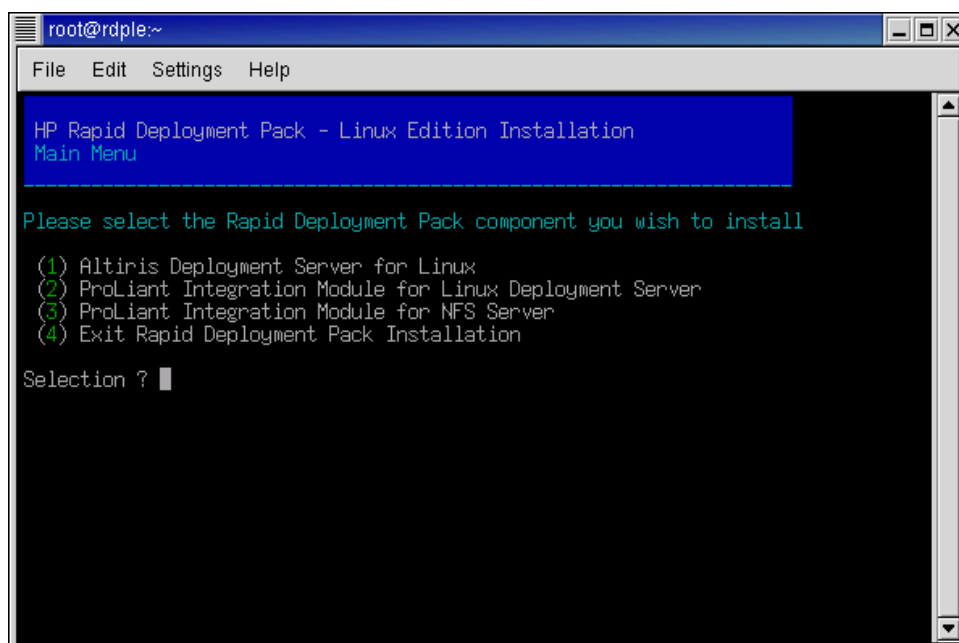
5. Read the license agreement, and then enter `q`.

6. If you agree to the terms of the license agreement, enter 1 and press the **Enter** key to accept the license agreement.

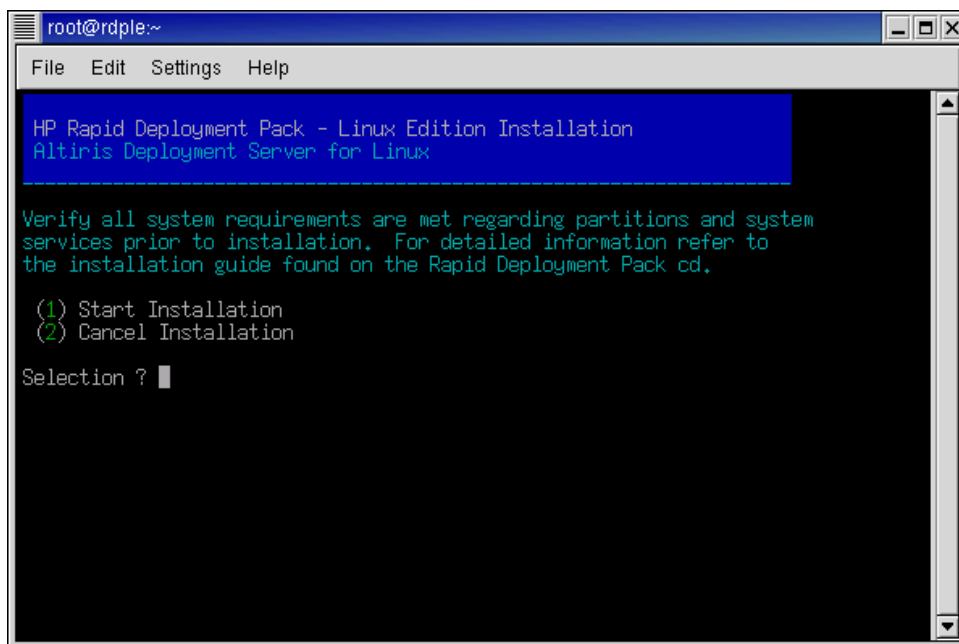


Altiris Deployment Server for Linux

1. At the Rapid Deployment Pack main menu, enter 1 to select **Altiris Deployment Server for Linux**, and then press the **Enter** key.

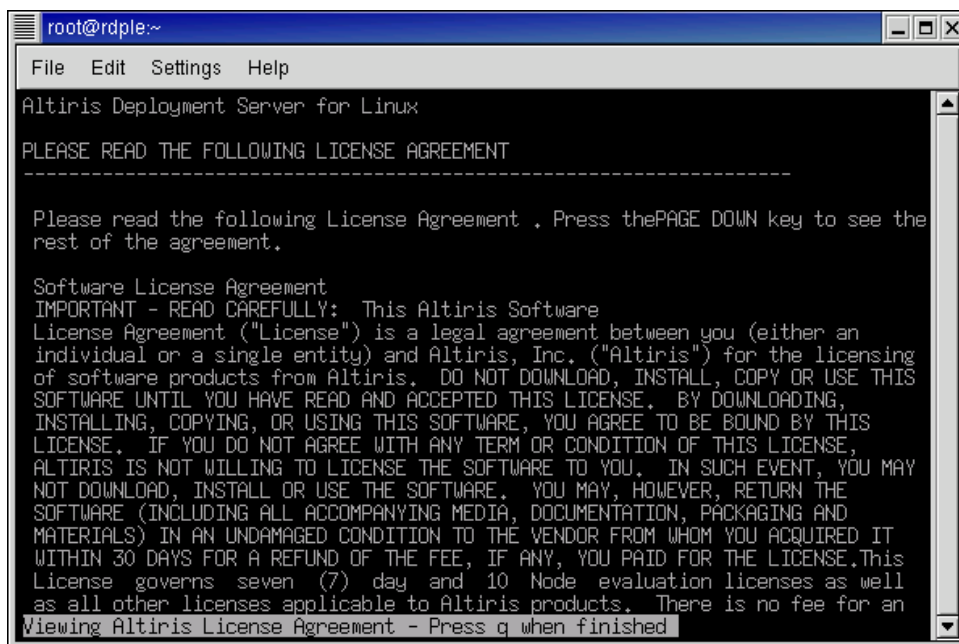


2. Enter 1 and press the **Enter** key to start the installation.



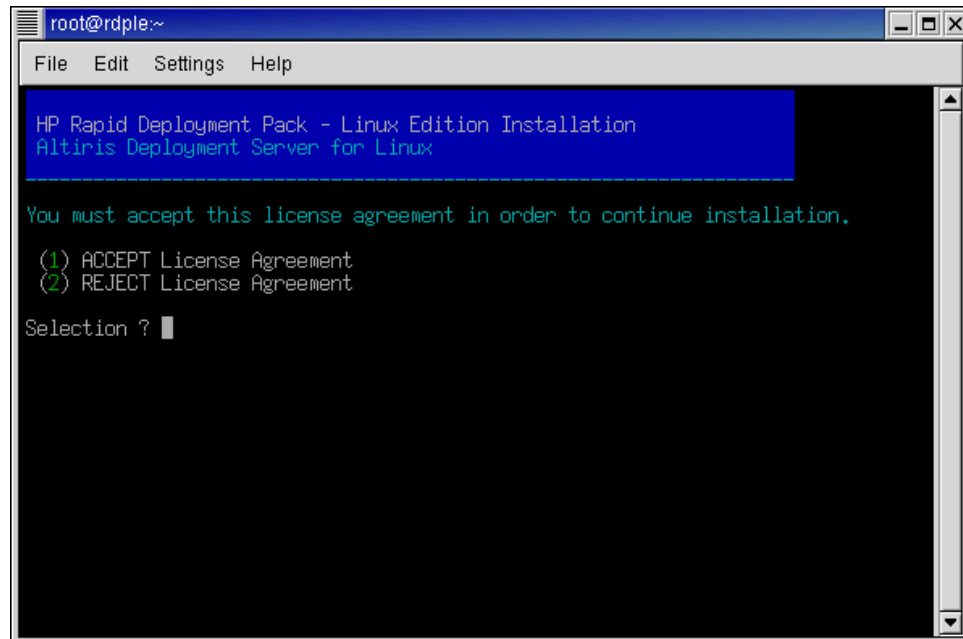
```
root@rdple:~  
File Edit Settings Help  
HP Rapid Deployment Pack - Linux Edition Installation  
Altiris Deployment Server for Linux  
  
Verify all system requirements are met regarding partitions and system  
services prior to installation. For detailed information refer to  
the installation guide found on the Rapid Deployment Pack cd.  
  
(1) Start Installation  
(2) Cancel Installation  
  
Selection ?
```

3. Read the license agreement, and then enter **q**.



```
root@rdple:~  
File Edit Settings Help  
Altiris Deployment Server for Linux  
  
PLEASE READ THE FOLLOWING LICENSE AGREEMENT  
-----  
  
Please read the following License Agreement . Press thePAGE DOWN key to see the  
rest of the agreement.  
  
Software License Agreement  
IMPORTANT - READ CAREFULLY: This Altiris Software  
License Agreement ("License") is a legal agreement between you (either an  
individual or a single entity) and Altiris, Inc. ("Altiris") for the licensing  
of software products from Altiris. DO NOT DOWNLOAD, INSTALL, COPY OR USE THIS  
SOFTWARE UNTIL YOU HAVE READ AND ACCEPTED THIS LICENSE. BY DOWNLOADING,  
INSTALLING, COPYING, OR USING THIS SOFTWARE, YOU AGREE TO BE BOUND BY THIS  
LICENSE. IF YOU DO NOT AGREE WITH ANY TERM OR CONDITION OF THIS LICENSE,  
ALTIRIS IS NOT WILLING TO LICENSE THE SOFTWARE TO YOU. IN SUCH EVENT, YOU MAY  
NOT DOWNLOAD, INSTALL OR USE THE SOFTWARE. YOU MAY, HOWEVER, RETURN THE  
SOFTWARE (INCLUDING ALL ACCOMPANYING MEDIA, DOCUMENTATION, PACKAGING AND  
MATERIALS) IN AN UNDAMAGED CONDITION TO THE VENDOR FROM WHOM YOU ACQUIRED IT  
WITHIN 30 DAYS FOR A REFUND OF THE FEE, IF ANY, YOU PAID FOR THE LICENSE.This  
License governs seven (7) day and 10 Node evaluation licenses as well  
as all other licenses applicable to Altiris products. There is no fee for an  
Viewing Altiris License Agreement - Press q when finished
```

4. If you agree to the terms of the license agreement, enter 1 and press the **Enter** key to accept the license agreement.



5. Enter 1 and press the **Enter** key to upgrade your software. Current database content, DHCP settings, and security settings are retained.

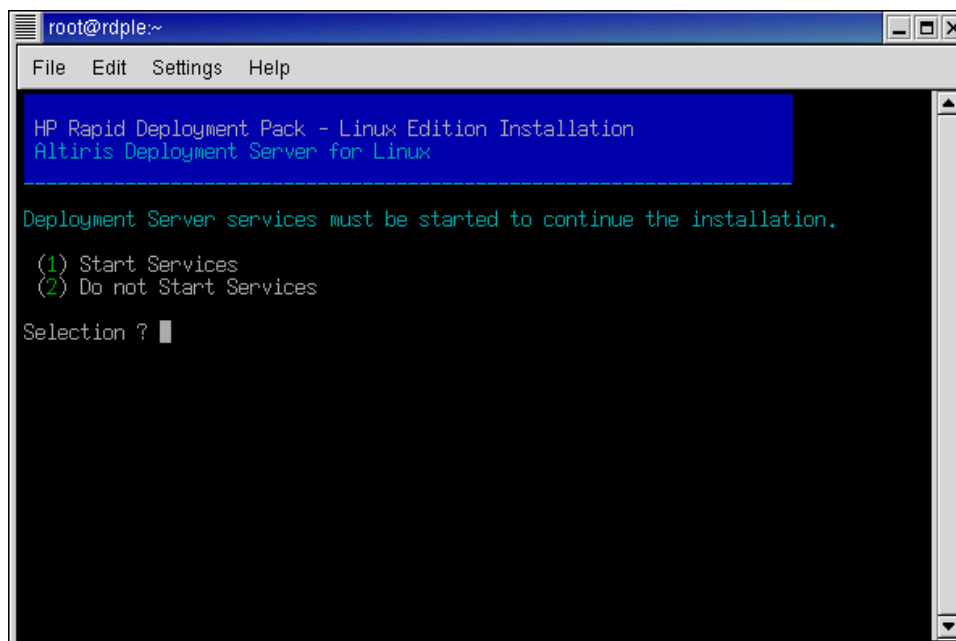
If either DHCP or PXE services were not previously installed, you are prompted to select whether to install and determine settings for either or both of these services during the upgrade process.



WARNING: The default initial and managed PXE configurations as well as the images are replaced. If the default or managed PXE configurations or images have been customized, capture this information before installation as the configurations and images will be overwritten.

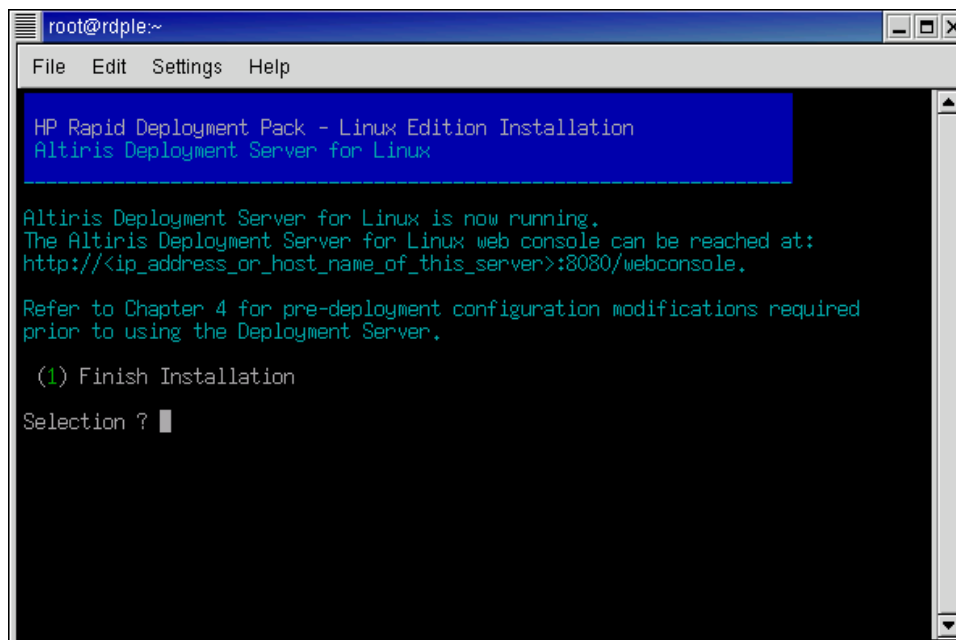
```
root@rdple:~  
File Edit Settings Help  
HP Rapid Deployment Pack - Linux Edition Installation  
Altiris Deployment Server for Linux  
-----  
A version of Altiris Deployment Server for Linux is currently installed.  
Selecting Upgrade will retain your current database content, dhcp settings,  
pxe configurations, and all current security settings.  
WARNING!  
Selecting Overwrite will remove your current database, dhcp settings,  
pxe configurations and images, and security settings.  
(1) Upgrade  
(2) Overwrite  
Selection ? █
```


6. After the upgrade completes, enter 1 and press the **Enter** key to start the Deployment Server services.



```
root@rdple:~  
File Edit Settings Help  
HP Rapid Deployment Pack - Linux Edition Installation  
Altiris Deployment Server for Linux  
-----  
Deployment Server services must be started to continue the installation.  
(1) Start Services  
(2) Do not Start Services  
Selection ? █
```

7. The following screen appears confirming that the Deployment Server services have started and providing information for accessing the Web console. Enter 1 and press the **Enter** key to finish the installation.

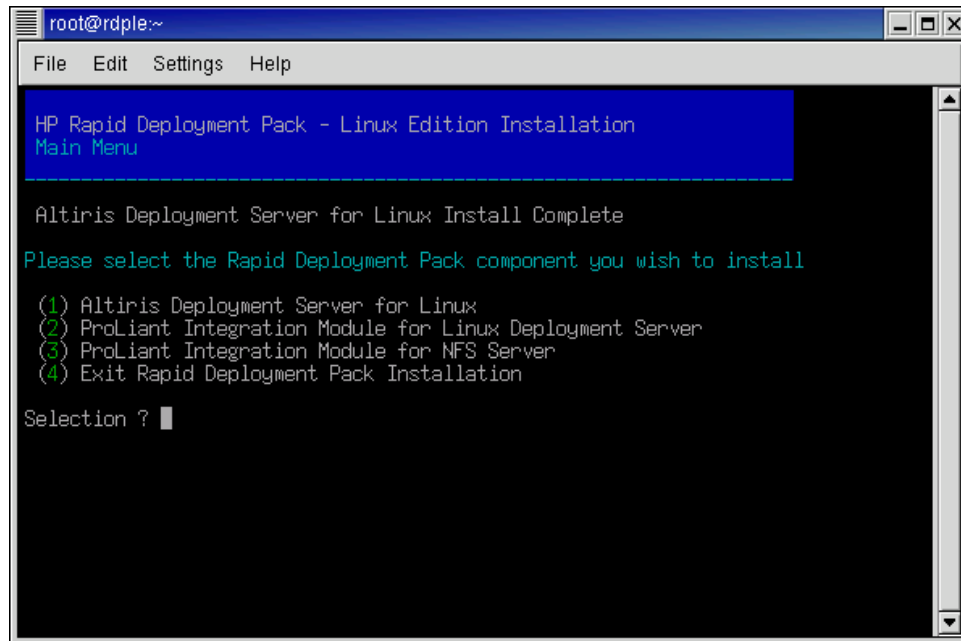


```
root@rdple:~  
File Edit Settings Help  
HP Rapid Deployment Pack - Linux Edition Installation  
Altiris Deployment Server for Linux  
-----  
Altiris Deployment Server for Linux is now running.  
The Altiris Deployment Server for Linux web console can be reached at:  
http://<ip_address_or_host_name_of_this_server>:8080/webconsole.  
Refer to Chapter 4 for pre-deployment configuration modifications required  
prior to using the Deployment Server.  
(1) Finish Installation  
Selection ? █
```

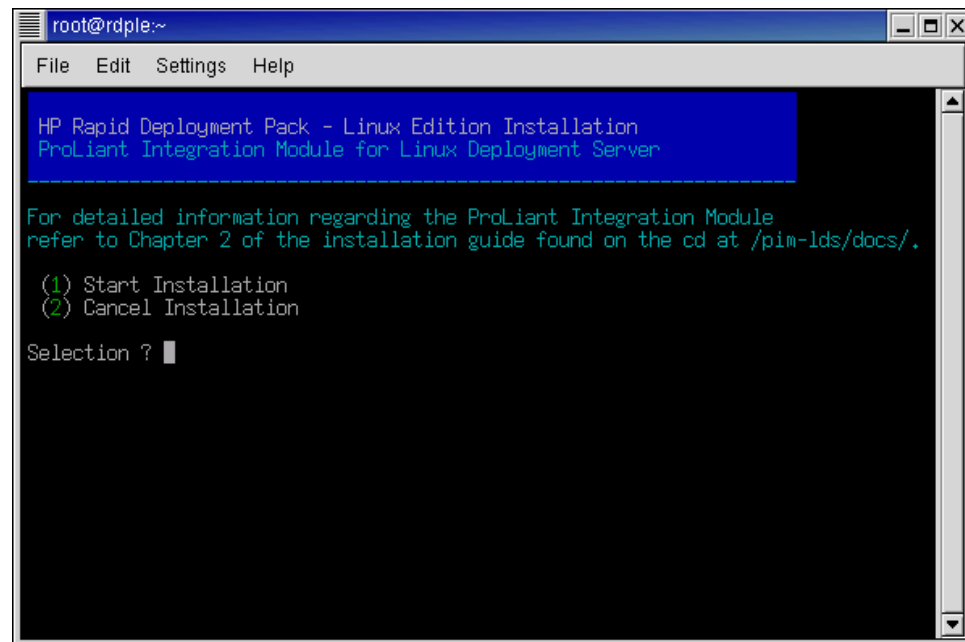
ProLiant Integration Module for Linux Deployment Server

1. At the Rapid Deployment Pack main menu, enter 2 to select **ProLiant Integration Module for Linux Deployment Server**, and then press the **Enter** key.

IMPORTANT: If you have modified any of the provided batch files or configuration files, be sure you have renamed the files and made backups. The upgrade program automatically overwrites the provided files, including the documentation, SmartStart Scripting Toolkit, and batch files, located at `./deploy/tools/scripts` and `./deploy/configs`.

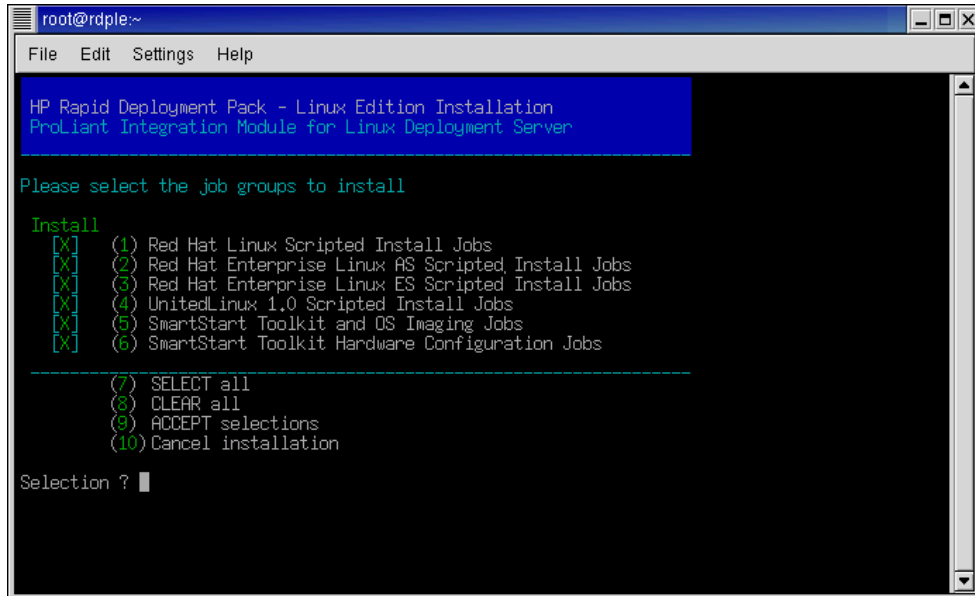


2. Enter 1 and press the **Enter** key to start the installation.



- For each set of deployment jobs to install, enter the corresponding selection number for the jobs, and then press the **Enter** key.

To select all jobs, enter the appropriate number to **SELECT all**, and then press the **Enter** key.



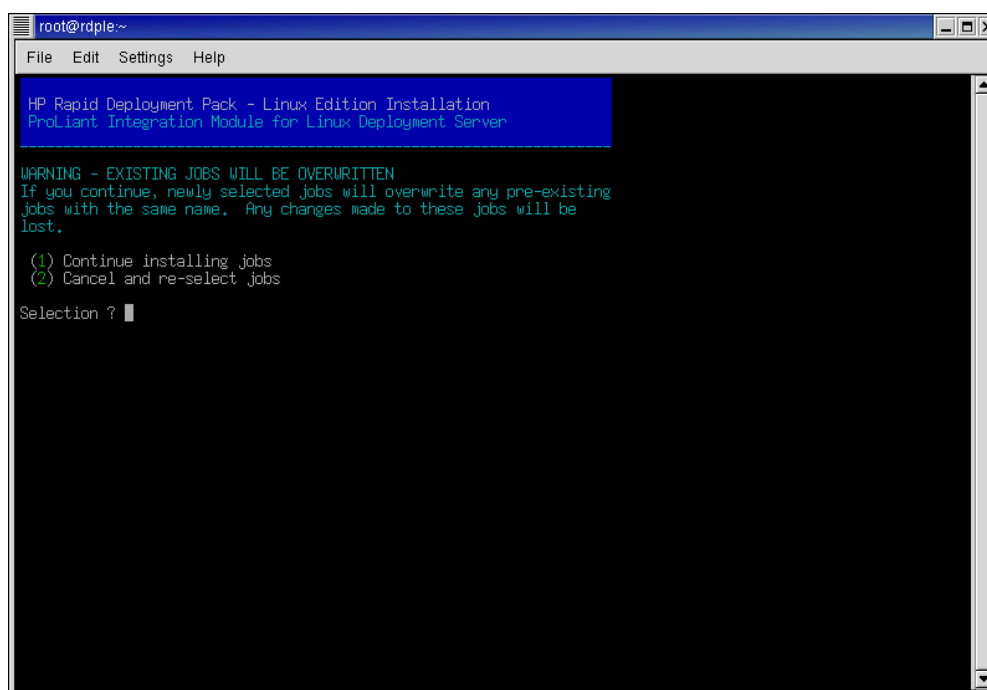
```
root@rdple:~  
File Edit Settings Help  
HP Rapid Deployment Pack - Linux Edition Installation  
ProLiant Integration Module for Linux Deployment Server  
  
Please select the job groups to install  
  
Install  
[X] (1) Red Hat Linux Scripted Install Jobs  
[X] (2) Red Hat Enterprise Linux AS Scripted Install Jobs  
[X] (3) Red Hat Enterprise Linux ES Scripted Install Jobs  
[X] (4) UnitedLinux 1.0 Scripted Install Jobs  
[X] (5) SmartStart Toolkit and OS Imaging Jobs  
[X] (6) SmartStart Toolkit Hardware Configuration Jobs  
-----  
  (7) SELECT all  
  (8) CLEAR all  
  (9) ACCEPT selections  
 (10) Cancel installation  
  
Selection ? █
```

- After selecting the jobs to install, enter the appropriate number to **ACCEPT selections**, and then press the **Enter** key. It might take several minutes to import the jobs, depending on number of selections.

5. When prompted, select whether to continue the installation and overwrite any existing jobs or cancel and reselect jobs.

IMPORTANT: If you have modified any of the provided jobs, be sure you have renamed these jobs and made backups before overwriting the existing jobs. Backups can be made from the Web console.

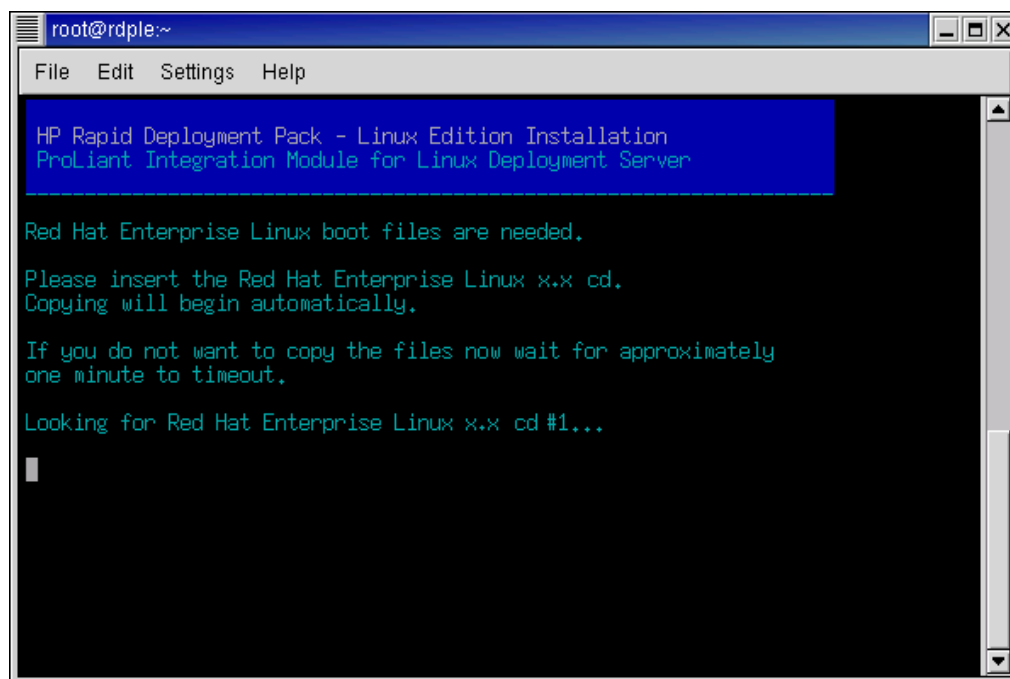
New Rapid Deployment Pack versions might contain updated ProLiant Support Pack files. These new files are added to `/usr/cpqrdp/ss.xxx/yyyy/csp` on the NFS server during the ProLiant Integration Module for NFS Server installation, where `xxx` represents the new ProLiant Support Pack version and `yyyy` represents the distribution shortcut name. Jobs added or updated during installation reference the new support files.



6. If Red Hat Enterprise Linux scripted install jobs are imported, you are prompted to copy the Red Hat Enterprise Linux boot files to the Deployment Server directory. Insert the designated Red Hat Enterprise Linux CD #1 when prompted. If the installation times out while waiting for the CD, either retry or skip this step when prompted.

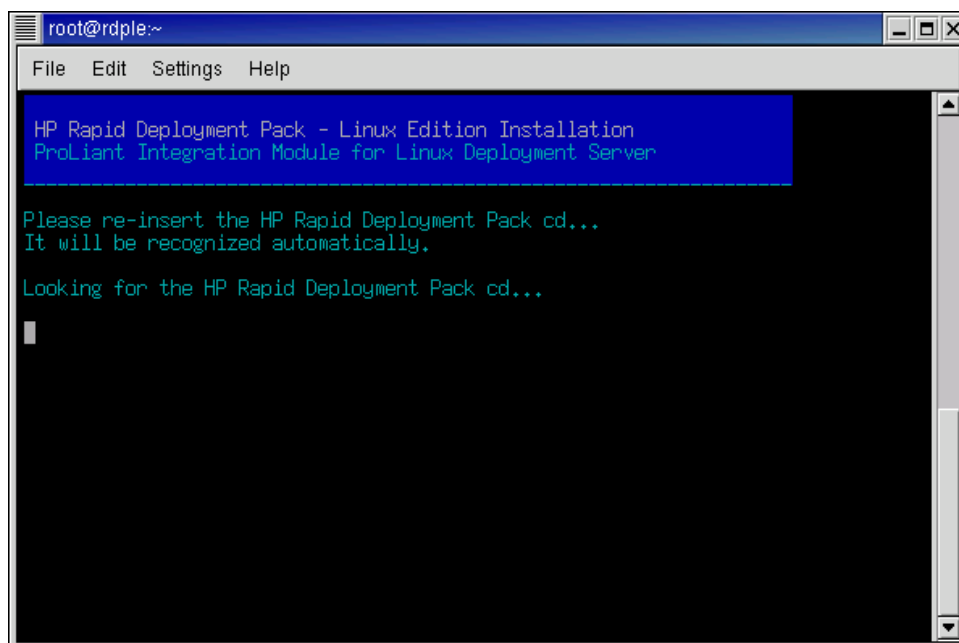
IMPORTANT: If you omit copying the Red Hat Enterprise Linux boot files at this time by selecting **Skip this step** after the time-out, manually install these files at a later time. For instructions, refer to Appendix A of this guide.

NOTE: Red Hat Enterprise Linux distributions CDs are installed on the NFS server. Use the same CD distribution during the installations of the Deployment Server and NFS server.

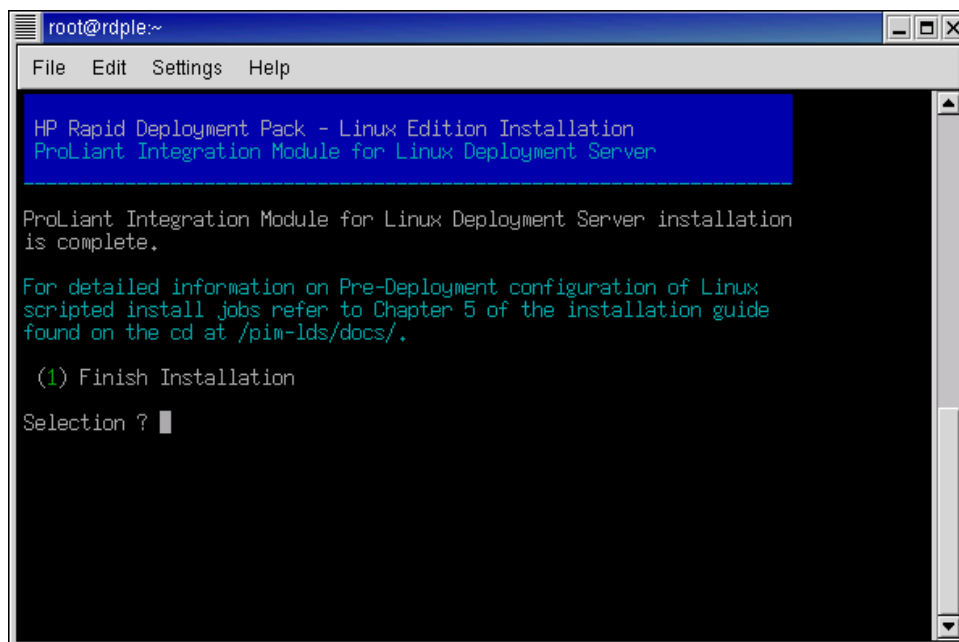


```
root@rdple:~  
File Edit Settings Help  
HP Rapid Deployment Pack - Linux Edition Installation  
ProLiant Integration Module for Linux Deployment Server  
  
Red Hat Enterprise Linux boot files are needed.  
Please insert the Red Hat Enterprise Linux x.x cd.  
Copying will begin automatically.  
  
If you do not want to copy the files now wait for approximately  
one minute to timeout.  
Looking for Red Hat Enterprise Linux x.x cd #1...  
█
```

7. If you removed the Rapid Deployment Pack—Linux Edition CD, reinsert the CD in the CD-ROM drive when prompted.

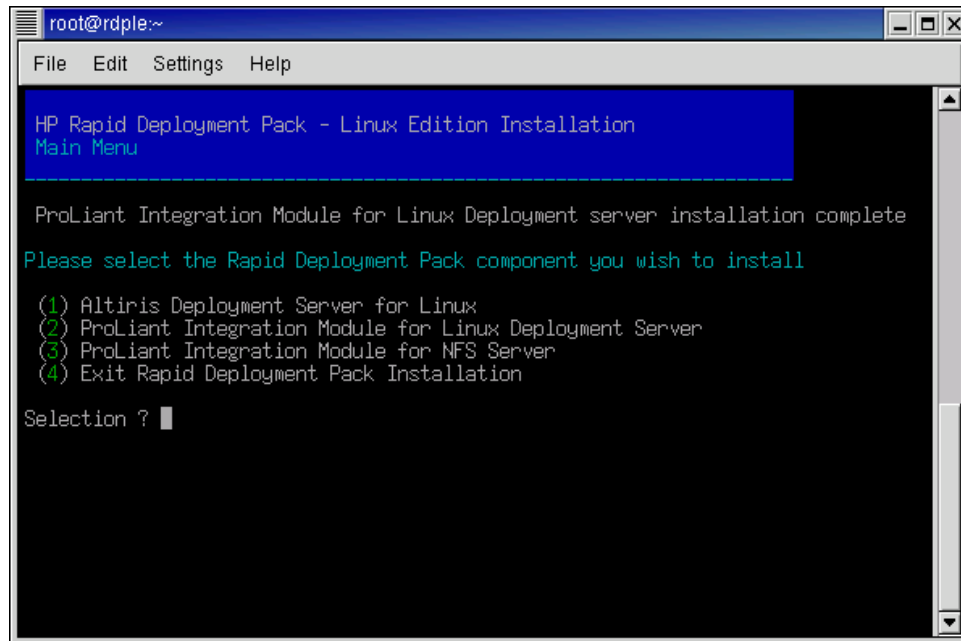


8. The following screen appears confirming that the ProLiant Integration Module for Linux Deployment Server installation is complete. Enter 1 and press the **Enter** key to finish the installation.

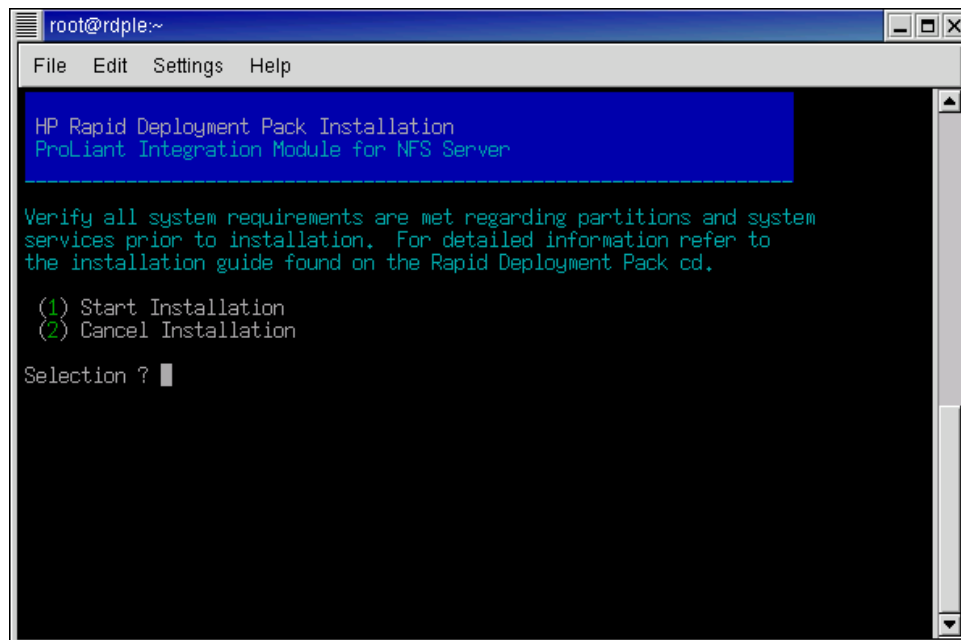


ProLiant Integration Module for NFS Server

1. At the Rapid Deployment Pack main menu, enter 3 to select **ProLiant Integration Module for NFS Server**, and then press the **Enter** key. .



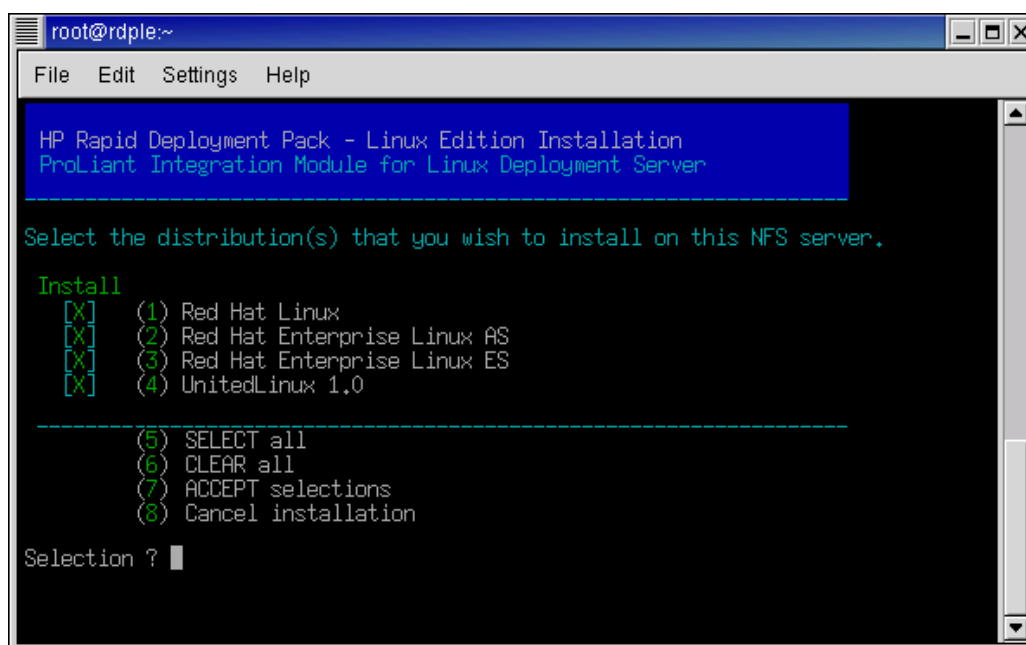
2. Enter 1 and press the **Enter** key to start the installation.



3. A list of the supported Linux distributions that can be deployed with Rapid Deployment Pack appears. Selecting a Linux distribution copies the ProLiant Support Pack files for that distribution and starts the Linux distribution CD query process to copy the Linux files onto the NFS server.

To select a distribution to install, enter the corresponding selection number for the distribution, and then press the **Enter** key. To select all distributions, enter the appropriate number to **SELECT all**, and then press the **Enter** key.

IMPORTANT: If UnitedLinux was installed previously, select UnitedLinux at this time to install and use the latest service pack. For service pack version information, refer to the *HP ProLiant Essentials Rapid Deployment Pack—Linux Edition Support Matrix*.



```

root@rdple:~
File Edit Settings Help

HP Rapid Deployment Pack - Linux Edition Installation
ProLiant Integration Module for Linux Deployment Server

Select the distribution(s) that you wish to install on this NFS server.

Install
[X] (1) Red Hat Linux
[X] (2) Red Hat Enterprise Linux AS
[X] (3) Red Hat Enterprise Linux ES
[X] (4) UnitedLinux 1.0

-----
(5) SELECT all
(6) CLEAR all
(7) ACCEPT selections
(8) Cancel installation

Selection ? █

```

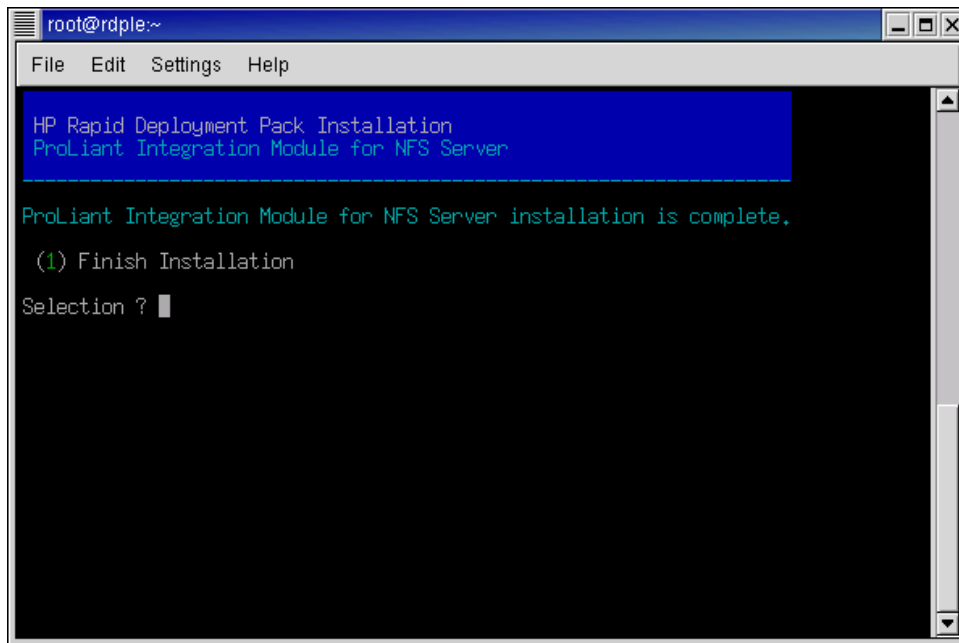
4. After selecting all the Linux distributions to install, enter the appropriate number to **ACCEPT selections**, and then press the **Enter** key. The file copy and CD query process begins. If the Linux distribution CDs have already been copied to the NFS server, you are prompted to select whether to copy the files again.

IMPORTANT: The version and Update of the Red Hat Enterprise Linux CDs used during the installation of the NFS server and the Deployment Server must match.

If the ProLiant Support Pack files being installed are the same version as the files installed with the previous Rapid Deployment Pack installation, you are prompted to select whether to overwrite the existing ProLiant support files or skip the file update for each distribution installed. If you have modified any of the provided Linux installation files (Kickstart or control files), be sure you have renamed the files and made backups before selecting to overwrite the files.

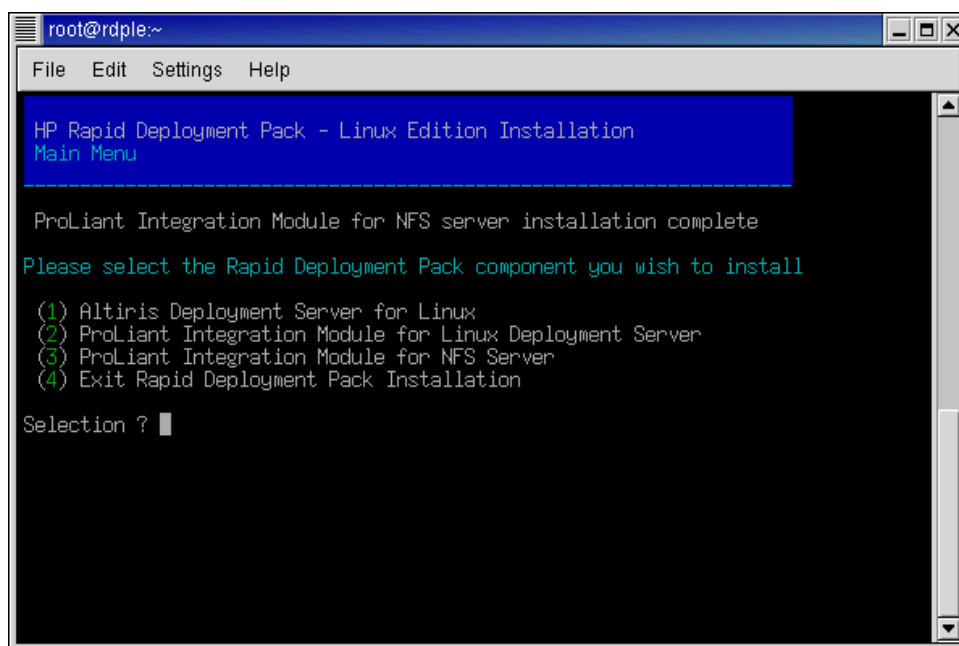
5. After the ProLiant Support Pack files and distributions files are copied, insert the Rapid Deployment Pack—Linux Edition CD into the CD-ROM drive when prompted.

6. The following screen appears confirming that the ProLiant Integration Module for NFS Server installation is complete. Enter 1 to finish the installation, and then press the **Enter** key.



Installation Complete

At the Rapid Deployment Pack main menu, enter 4 to select **Exit Rapid Deployment Pack Installation**, and then press the **Enter** key.



The Deployment Server installation is complete. However, before attempting to use the Deployment Server to perform Linux distribution scripted installations, refer to Chapters 4 and 5 in this guide for any necessary configuration modifications. Some modifications might not be necessary because the database contents were retained during the upgrade.

Pre-Deployment Configuration for the Deployment Server

The configuration modifications in this section might be necessary after a first-time installation of the Rapid Deployment Pack.

After an upgrade installation, HP recommends recreating physical boot diskettes. Refer to the “Creating Physical Boot Diskettes for Server Deployment” section.

If server blades are added to the deployment environment after the initial Rapid Deployment Pack installation, review the “Configuring ProLiant BL Server Enclosures” section for any configuration requirements.

Configuring the Deployment Server Access Settings for the Linux Web Console

1. Access the Web console through a Web browser at <http://hostname:8080/webconsole> where *hostname* is the host name of the Deployment Server or the static IP address of the Deployment Server in the form of *xxx.xxx.xxx.xxx*. For example:
<http://192.168.1.1:8080/webconsole>.

NOTE: Initial access to each page might be slow as Java™Server pages are compiled. Subsequent page access occurs more quickly.

2. At the Database Connect window, enter the Deployment Server host name or IP address, and then click **Connect**.

The screenshot shows a web browser window with the address bar displaying `/webconsole/default.jsp`. The page title is "Deployment Server Web Console". On the left, there is a sidebar with "Login" and "Install Agent Software" links. The main content area is titled "Database Connect" and contains the text "Please enter Deployment Database server name." Below this is a "Server name:" label followed by a text input field. A red asterisk is next to the label. Below the input field, it says "* = Required field." At the bottom of the form is a "Connect" button. The HP and Altiris logos are visible in the top right corner of the page.

3. At the Console Login window, enter a password, and then click **Save**. This password is used to gain access to the Web console and should be retained for future use.

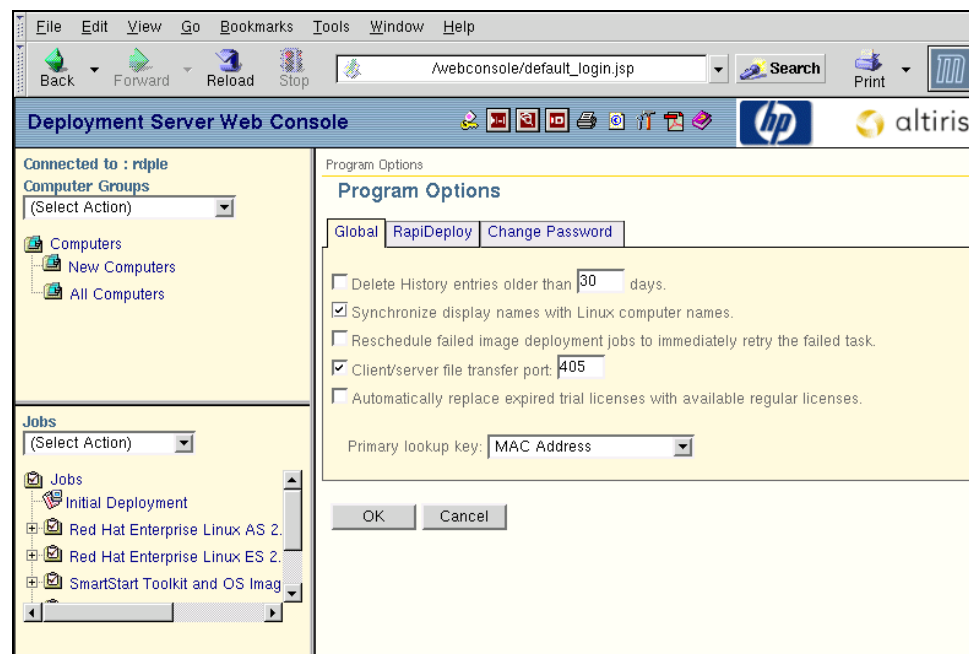
The screenshot shows the same web browser window, but the page title is "Console Login". The sidebar remains the same. The main content area is titled "Console Login" and contains the text "Please register for console." Below this are two text input fields: "Password:" and "Confirm password:". Both labels have a red asterisk next to them. Below the input fields, it says "* = Required field." At the bottom of the form is a "Save" button. The HP and Altiris logos are visible in the top right corner of the page.

Synchronizing the Web Console Display Name with the Linux Name

The Deployment Server can use a Web console display name that is different from the actual server host name. However, you can select to have the Web console always reflect the same name as the server host name.

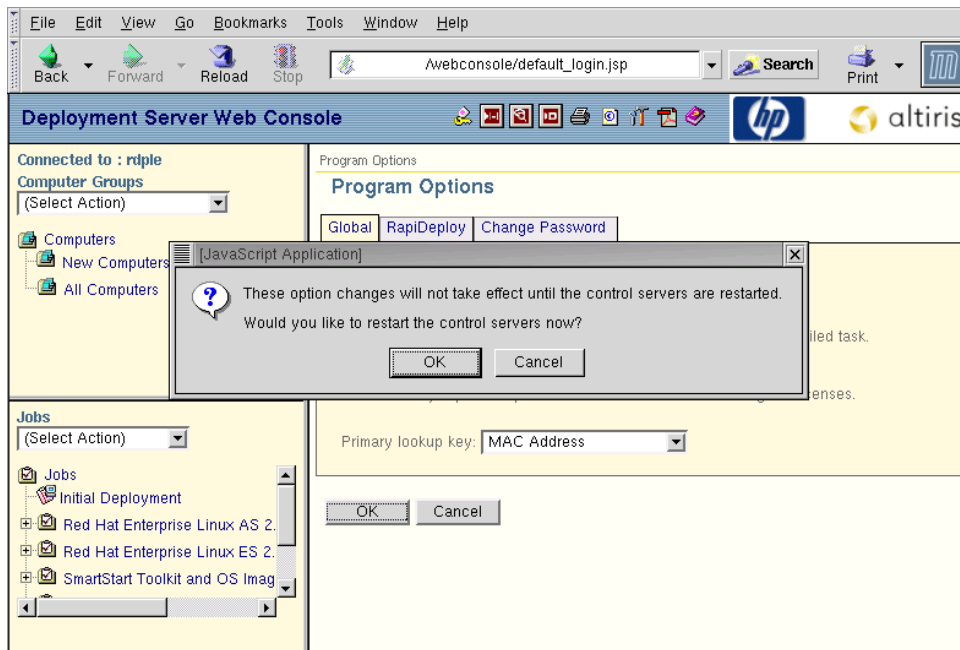
To synchronize the Web console and server host name:

1. At the Web console toolbar, click the **Program Options** icon. The Program Options information appears in the Details pane.
2. Select the **Global** tab.
3. Select **Synchronize display names with Linux computer names**.



4. Click **OK**.

5. Click **OK** when prompted to restart the control servers.



Modifying the Primary Lookup Key

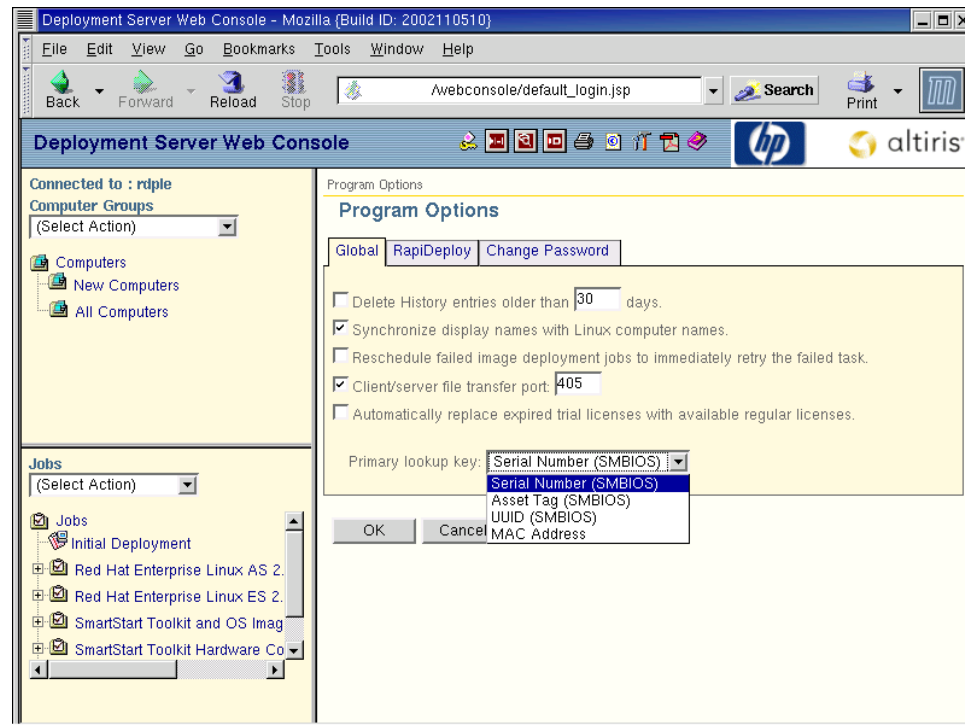
The Deployment Server uses the primary lookup key to determine whether a server is already in the database.

HP recommends setting the primary lookup key as the server serial number. Setting the primary lookup key as the server serial number has two benefits:

- It enables servers to be imported by their serial number, rather than keys that are more difficult to determine, such as the MAC (media access control) address.
- It prevents duplicate database entries from occurring when servers have two or more network interface cards (NICs).

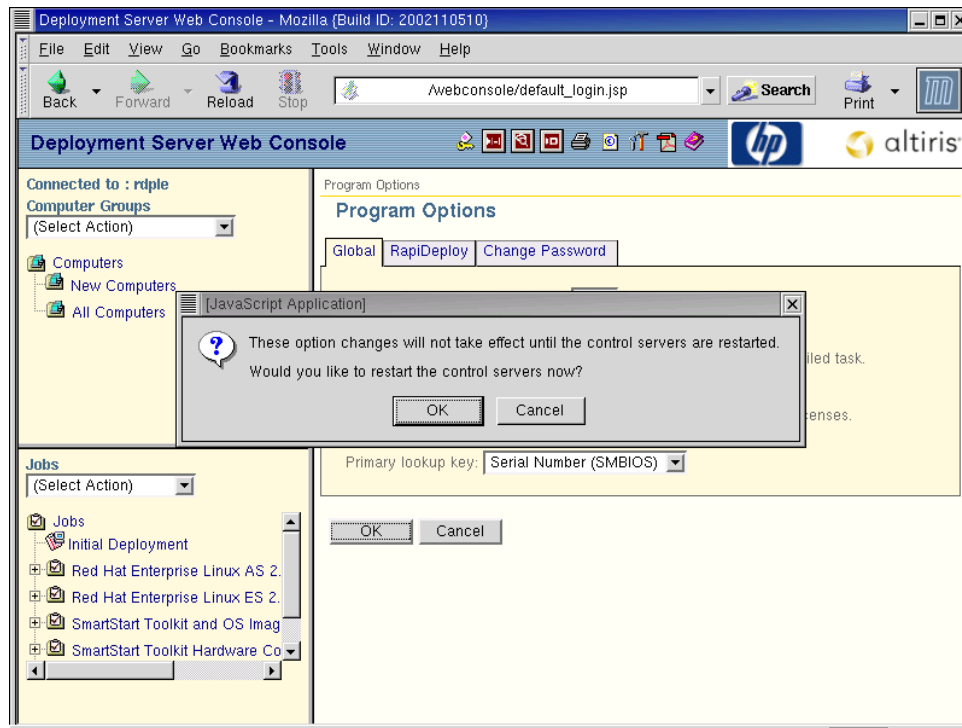
To change the primary lookup key to the server serial number:

1. At the Web console toolbar, click the **Program Options** icon. The Program Options information appears in the **Details** pane.
2. Select the **Global** tab.
3. From the Primary lookup key list, select **Serial Number (SMBIOS)**.



4. Click **OK**.

5. Click **OK** when prompted to restart the control servers.



Configuring ProLiant BL Server Enclosures

The Physical Devices view in the Web console displays the physical relationship among the racks, enclosures, and server blades using the rack name and enclosure name for each ProLiant BL server. The default name for the server rack is “UnnamedRack,” and the default name for the BL e-Class server enclosure is the MAC address of the NIC associated with the Integrated Administrator.

Setting the rack name and enclosure name is recommended before the first server in an enclosure connects to the Deployment Server. After ProLiant BL servers are powered up for the first time and the rack and enclosure names are recorded in the Deployment Server database, the servers must be rebooted for new rack and enclosure names to be discovered. In addition, the default-named rack and enclosure must be manually deleted from the Web console.

ProLiant BL e-Class Servers

To change the rack and enclosure names if the Integrated Administrator port is connected to a network with DHCP:

1. Browse to the DNS name located on the tag attached to the interconnect tray on the enclosure.
2. Log in to the Integrated Administrator using the user name and password located on the tag.

- At the Enclosure Information screen, change the **Enclosure Name** and **Rack Name**, and then click **Apply**.

IMPORTANT: Do not use the same enclosure name for multiple enclosures. Using the same enclosure name results in multiple server blades displayed in each bay for an enclosure and duplicate default server names.

The screenshot shows the HP ProLiant BL e-Class Integrated Administrator web interface. The top navigation bar includes links for Enclosure, Bays, Administration, Event List, and Interconnect. The left sidebar lists various configuration options. The main content area is titled "Enclosure Information" and contains a form with the following fields and values:

Status	
Enclosure Name:	00508BEF05A
Rack Name:	UnnamedRack
Enclosure Status:	<input checked="" type="checkbox"/> Degraded
Fan Status:	<input checked="" type="checkbox"/> Redundant Fans
Fan #1:	<input checked="" type="checkbox"/> OK (40%)
Fan #2:	<input checked="" type="checkbox"/> Standby
Fan #3:	<input checked="" type="checkbox"/> OK (40%)
Fan #4:	<input checked="" type="checkbox"/> Standby
Fan Spare Number:	253079-001
Chassis Temperature:	<input checked="" type="checkbox"/> OK (91°F / 33°C)
Fan Exhaust Temperature:	<input checked="" type="checkbox"/> OK (84°F / 29°C)
Blade Bay Temperature:	<input checked="" type="checkbox"/> OK (N/A)
Power	
Power Subsystem Status:	<input checked="" type="checkbox"/> Non-Redundant Power
Total Capacity:	1200 Watts
Power Supply #1 Status:	<input checked="" type="checkbox"/> OK

At the bottom of the form are "Apply" and "Cancel" buttons.

If the Integrated Administrator port is not connected to a network with DHCP, refer to the documentation shipped with the product for details concerning how to access the Integrated Administrator using other methods, such as the serial console.

After configuring the enclosure, install the ProLiant BL e-Class servers into the enclosure by following the instructions provided with the server hardware.

For more information regarding ProLiant BL e-Class servers, refer to the documentation shipped with the product.

ProLiant BL p-Class Servers

To configure all racks and the ProLiant p-Class enclosure properly, at least one server blade must be placed in each enclosure. Do not power on the server blade until the desired rack and enclosure names are set using the Integrated Lights-Out (iLO) interface. Otherwise, the server blade boots to PXE (if enabled), and the default rack and enclosure name is placed in the Deployment Server database.

To change the rack and enclosure names if the iLO port is connected to the network with DHCP services available:

1. Browse to the DNS name located on the tag attached to the ProLiant BL p-Class server.
2. Log on to iLO using the credentials on the tag.

NOTE: Users that do not have the Administrator ProLiant BL p-Class privilege can only view the settings.

3. Select the **BL p-Class** tab.
4. At the Rack Settings screen, change the **Rack Name** and **Enclosure Name**.

IMPORTANT: Do not use the same enclosure name for multiple enclosures. Using the same enclosure name results in multiple server blades displayed in each bay for an enclosure and duplicate default server names.

5. Click **Apply**.
6. After the parameter changes have been made, click **Apply** to complete the changes.
7. Log out, and log back into iLO.

For more information regarding iLO, refer to the documentation shipped with the product.

If the iLO port is not connected to a network with DHCP services available, refer to the documentation provided with your server blade for details about accessing iLO from the front panel of the server blade.

Creating Physical Boot Diskettes for Server Deployment

If PXE will not be used in the deployment infrastructure, one or more physical boot diskettes must be created to enable the target servers to communicate with the Deployment Server.

To create a DR-DOS boot diskette using the Boot Disk Creator within Altiris:

1. At the Web console toolbar, click the **Boot Disk Creator** icon. The Boot Disk Creator Web console opens.



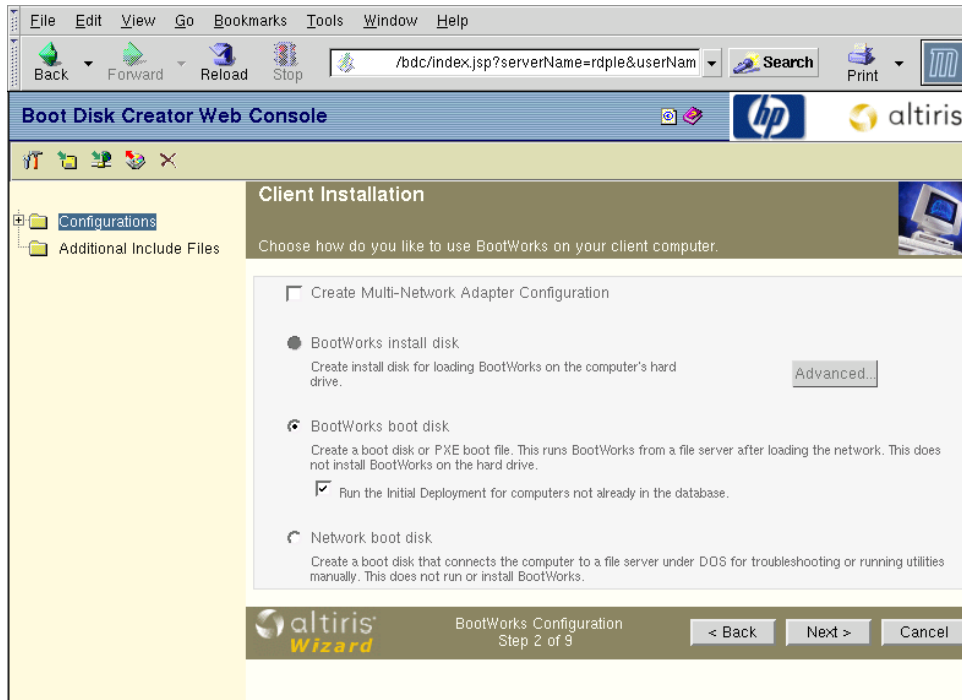
2. Click the **Create a New Configuration** icon in the Boot Disk Creator Web Console toolbar.

3. In the Details pane, enter a name for the configuration, such as DOS Boot Disk, and a description, and then click **Next**.

The screenshot shows a web browser window with the address bar displaying `/bdc/index.jsp?serverName=rdple&userNam`. The browser's menu bar includes File, Edit, View, Go, Bookmarks, Tools, Window, and Help. The toolbar contains Back, Forward, Reload, Stop, Search, and Print buttons. The page title is "Boot Disk Creator Web Console". The main content area is divided into a left sidebar and a main panel. The sidebar has a "Configurations" link and an "Additional Include Files" section. The main panel has a "Welcome" header with the instruction "Enter name and description for your configuration." Below this is a form with a required field for the configuration name, which has "DOS Boot Disk" entered. There is also a text area for a detailed description with the example text "Network boot disk for sales laptops with 3C905 driver." A legend indicates that an asterisk (*) denotes a required field. The footer of the page shows the "altiris Wizard" logo, the text "BootWorks Configuration Step 1 of 9", and navigation buttons for "< Back", "Next >", and "Cancel".

4. Select **Bootworks boot disk**, select **Run the Initial Deployment for computers not already in the database**, and then click **Next**.

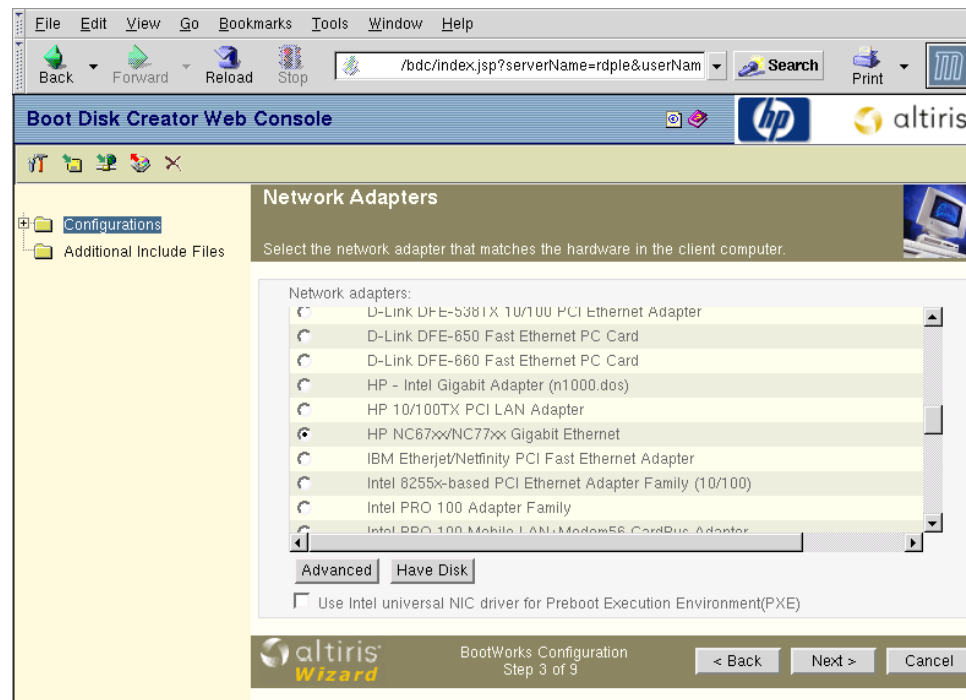
NOTE: The Initial Deployment selection can be used on boot diskettes even when the computer is a managed computer, and Initial Deployment only runs the first time a computer appears in the Deployment Server.



5. Select the appropriate driver for the target server NIC.

- For Intel-based Gigabit NICs, select **HP –Intel Gigabit Adapter (n1000 .dos)**.
- For Intel 10/100 NICs, select **HP 10/100TX PCI LAN Adapter**.
- For ProLiant DL 100-series Broadcom-based servers, select **Broadcom NetXtreme Gigabit Ethernet**.
- For other ProLiant servers with Broadcom-based NICs, select **HP NC67xx/NC77xx Gigabit Ethernet**.

Verify **Use Intel universal NIC driver for Preboot Execution Environment (PXE)** is not selected, and then click **Next**.



6. If static IP addresses are required, enter the appropriate information, and then click **Next** to accept the IP settings.

The screenshot shows a web browser window displaying the 'Boot Disk Creator Web Console'. The browser's address bar shows the URL `/bdc/index.jsp?serverName=rdple&userNam`. The console has a blue header with the title 'Boot Disk Creator Web Console' and logos for HP and Altiris. On the left, there is a sidebar with a tree view containing 'Configurations' and 'Additional Include Files'. The main content area is titled 'TCP/IP Protocol Settings' and contains the following text: 'The client computer will use TCP/IP to communicate to the Altiris Server. Select your TCP/IP settings for the client.' Below this text are two radio button options: 'Obtain an IP address from a DHCP server' (which is selected) and 'Use a static IP address. This IP address will be assigned to the client computer'. Under the static IP option, there are input fields for 'IP address:', 'Subnet mask:', 'Default gateway:', 'Primary WINS server:', and 'Secondary WINS server:'. The 'IP address' field is filled with '100.100.100.100', 'Subnet mask' with '255.255.255.0', and the others are empty. At the bottom of the console, there is a footer with the Altiris Wizard logo, the text 'BootWorks Configuration Step 4 of 9', and three buttons: '< Back', 'Next >', and 'Cancel'.

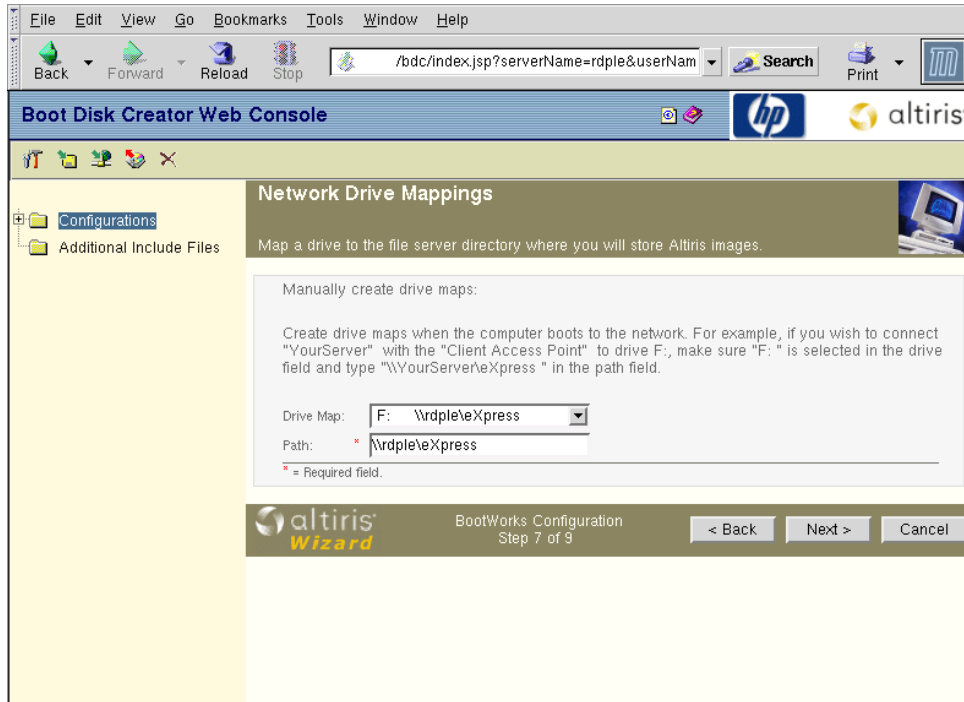
7. In the Use TCP/IP to connect to Altiris Server field, verify the Server IP address reflects the IP address of your Deployment Server, and then click **Next**.

The screenshot shows the 'Boot Disk Creator Web Console' interface. The left sidebar contains 'Configurations' and 'Additional Include Files'. The main content area is titled 'Altiris Server Communication' and instructs the user to 'Select how the client computer will connect to the Altiris Server'. There are two radio button options: 'Use TCP/IP multicasting to find the Altiris Server' (selected) and 'Use TCP/IP to connect to Altiris Server'. The first option has fields for 'IP address' (225.1.2.3), 'Port' (402), and 'Altiris Server name' (blank). The second option has fields for 'Server IP address' (blank) and 'Port' (402). At the bottom, it says 'altiris Wizard BootWorks Configuration Step 5 of 9' with '< Back', 'Next >', and 'Cancel' buttons.

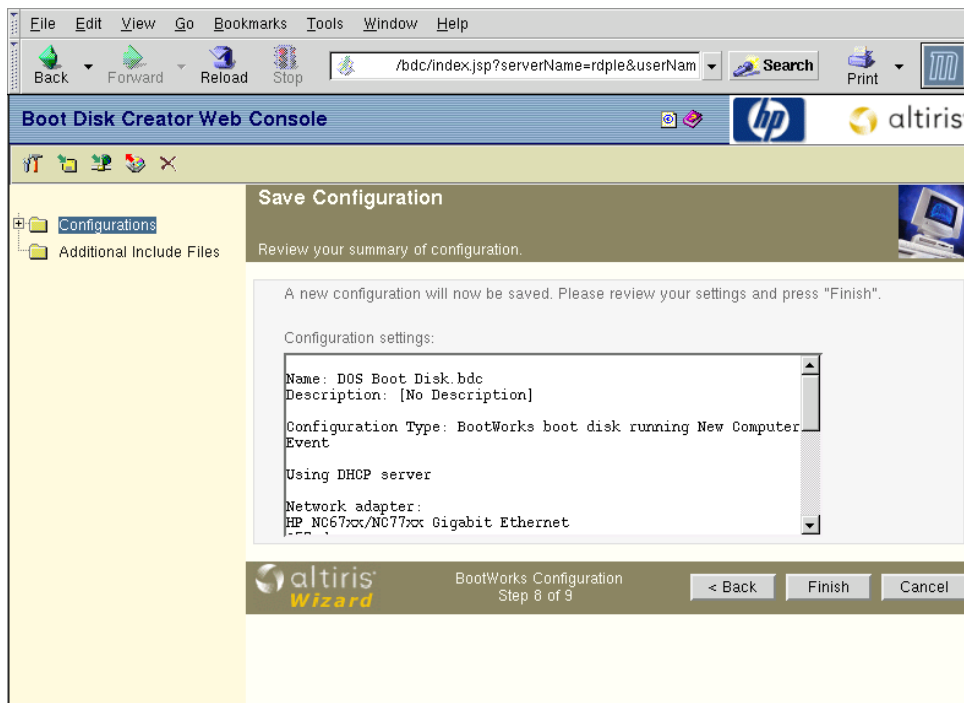
8. Click **Next** to accept the default workgroup name and login account settings.

The screenshot shows the 'Boot Disk Creator Web Console' interface. The left sidebar contains 'Configurations' and 'Additional Include Files'. The main content area is titled 'Network Connection' and instructs the user to 'Enter your network settings for the client computer. These will be used to connect to your file server.' It asks the user to 'Enter the name of the Domain/Workgroup you wish to connect to.' with a field containing 'workgroup'. Below that, it asks for 'Enter the account information that will be used to connect to your file server.' with fields for 'User name' (leuser), 'Password' (masked with asterisks), and 'Confirm password' (masked with asterisks). A note at the bottom left states '* = Required field.' At the bottom, it says 'altiris Wizard BootWorks Configuration Step 6 of 9' with '< Back', 'Next >', and 'Cancel' buttons.

9. Click **Next** to accept the default drive mappings settings.

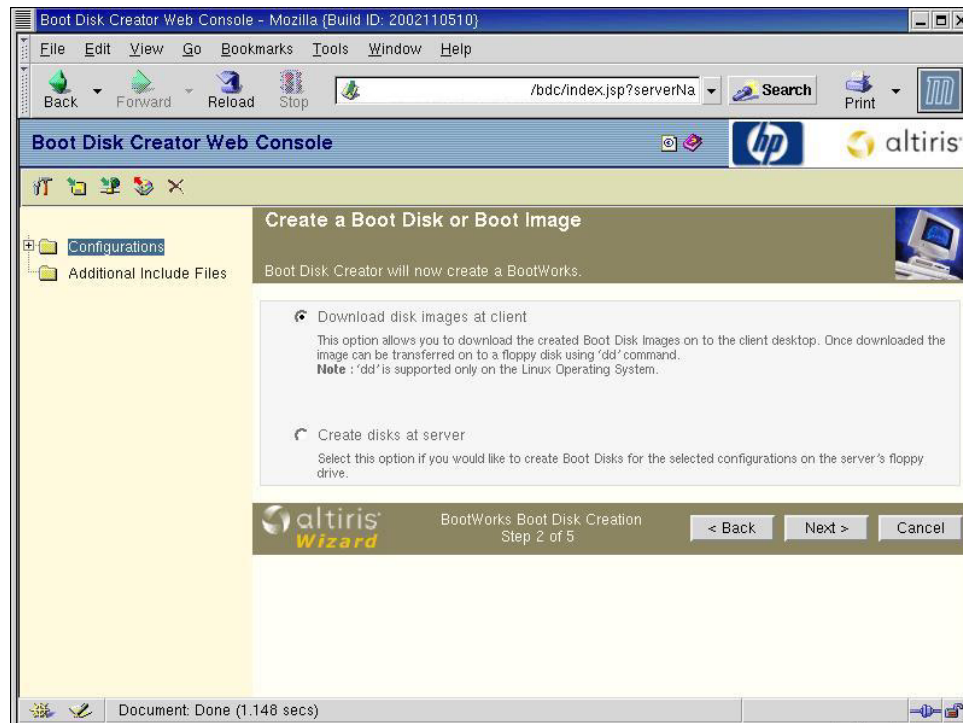


10. Click **Finish** to create the configuration.



11. Click **Close**.

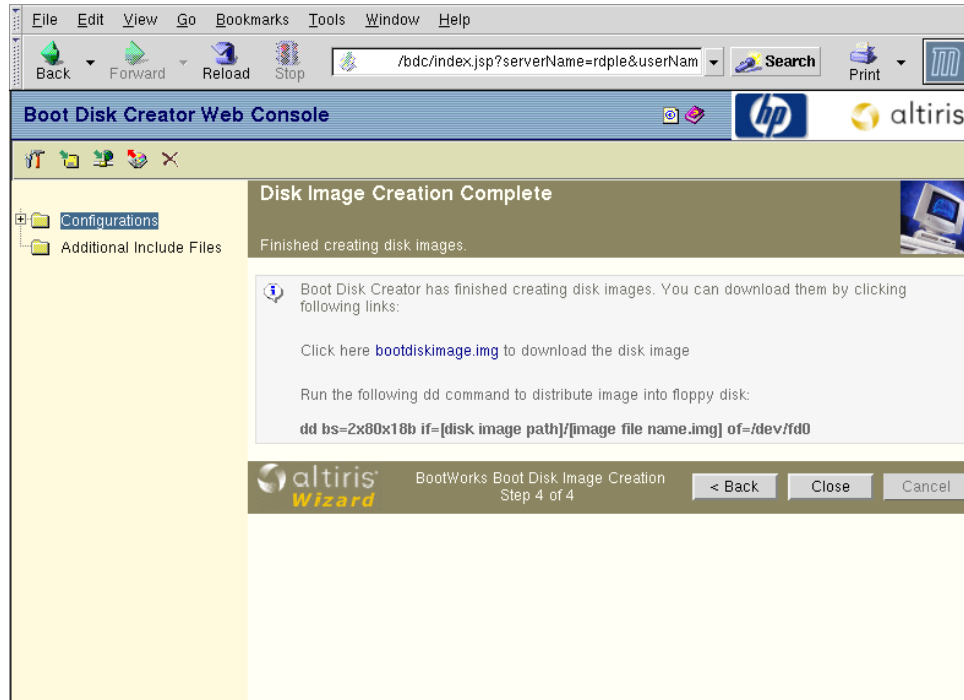
12. From the Boot Disk Creator Web Console toolbar, click the **Create Disks** icon. The Choose Configuration selections appear in the Details pane.
13. Select the newly created configuration (“DOS Boot Disk” in this example), and click **Next**.
14. Select **Download disk images at client**, and then click **Next**.



15. Click the boot disk image link (bootdiskimage.img) referred to in the **Disk Image Creation Complete** instructions and follow the on-screen instructions. Note the additional instructions to convert the file while copying the image onto a diskette.

Boot Disk Creator uses the same image file name of bootdiskimage.img. If you are saving multiple configurations, use different names when saving to your drive.

16. Click **Close**.



17. To duplicate the image onto a diskette, follow the instructions at the Disk Image Creation Complete screen, entering the specified command at a Linux prompt.

Pre-Deployment Configuration for Linux Scripted Install Jobs

These configuration modifications must be performed before using Linux scripted install jobs, and are necessary after a first-time installation or upgrade of the Rapid Deployment Pack.

Preconfiguring the ProLiant Support Pack for Linux

The Web-based Management portion of the Foundation Agents requires that a password be configured before installation. This password is also used by several other components in the ProLiant support software. Without the password, the Web-based Management portion of the Foundation Agents installs but does not function correctly and is not accessible on your deployed servers.

Support software directories and scripts associated with each Linux operating system are located on the NFS server. These files are located at `/usr/cpqrdr/ss.xxx/yyyy/csp`, where `xxx` is the ProLiant Support Pack version and `yyyy` is the Linux distribution shortcut name. For example, `rhas21` represents Red Hat Enterprise Linux AS 2.1.

A support software script, `yyyy.sh`, is used to install the ProLiant support software. This script uses the input file, `linuxpsp.txt`, to set various parameters, including the Linux Web Agent passwords and SNMP settings.

The Linux Web Agent default passwords are listed in Table 5-1.

Table 5-1: Linux Web Agent Default Passwords

User Name	Password
Administrator	password
Operator	password
User	password

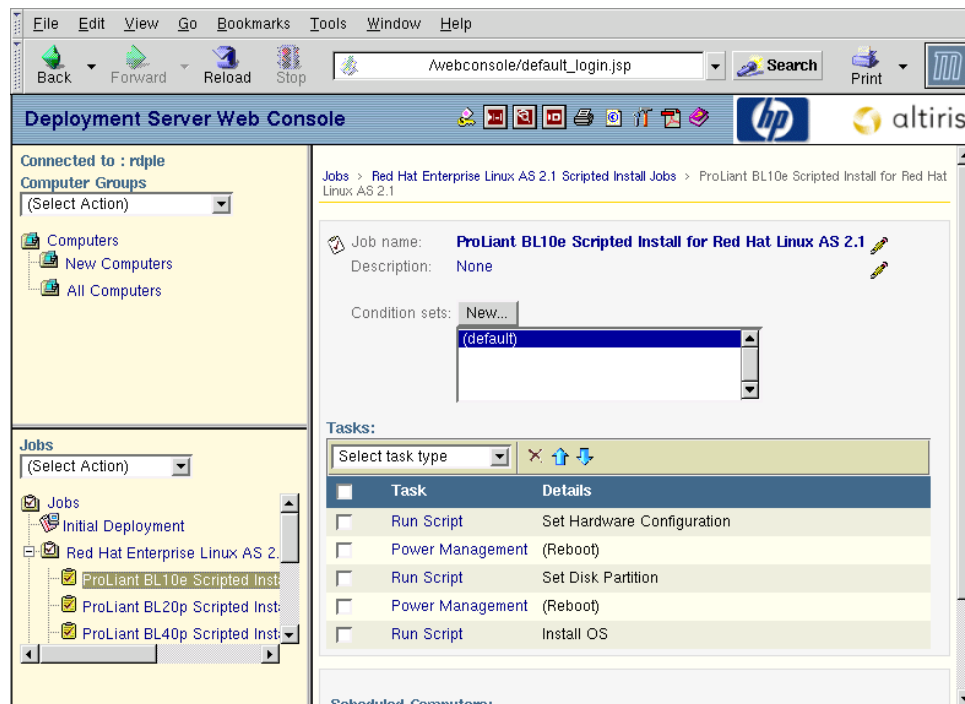
Because the default passwords are documented here, HP recommends changing the passwords either by editing the support software script as previously described or by browsing to the installed server, port 2301 or secured port 2381, and changing the password. Changing the password by editing the support software script before a scripted installation allows these passwords to be mass deployed to target servers. Additionally, after the scripted installation, modified passwords can be replicated by copying the `/var/spool/compaq/wbem/CPQHMMD.ACL` file to other servers.

Preconfiguring Deployment Settings for Red Hat Linux Scripted Install Jobs

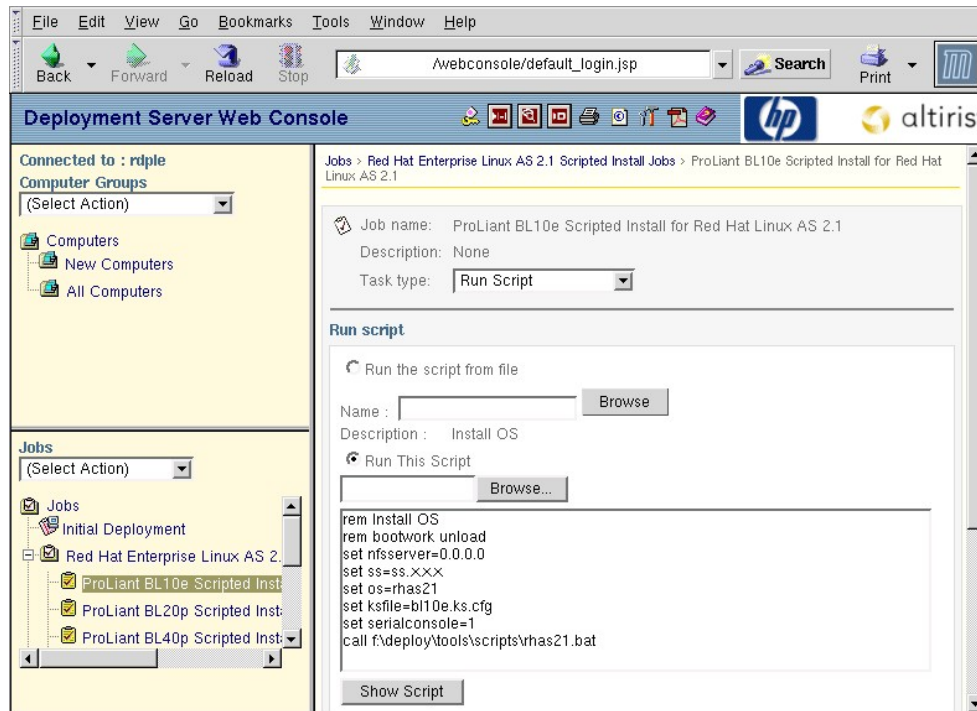
For the Red Hat Linux scripted install jobs to operate properly, they must be modified with the host and domain name or IP address of the NFS server on which the installation files are located.

To update each Red Hat Linux scripted install job to point to the NFS server:

1. Locate the Red Hat Linux scripted install jobs to be modified within the Web console. Expand the tree view, if necessary, to view the jobs in the Jobs pane.
2. Click the job. The job properties information appears in the Details pane.



- Click the last **Run Script** link of the Install OS – Run Script task. The run script properties information appears in the Details pane.



- Locate the following line in the script:
`set nfsserver=0.0.0.0`
- Change 0.0.0.0 to the host and domain name of the NFS server as follows:

```
set nfsserver=yournfssvr.yourdomain
```

where *yournfssvr* is the host name of the NFS server and *yourdomain* is the domain name for the NFS server.

Instead of a host name and domain name, an IP address can be specified as follows:

```
set nfsserver=xxx.xxx.xxx.xxx
```

where *xxx.xxx.xxx.xxx* is the fixed IP address of the NFS server.

NOTE: Using the IP address to connect to the NFS server is more effective than using a DNS name because using a DNS name requires the existence of a DNS server properly configured with an entry for the NFS server.

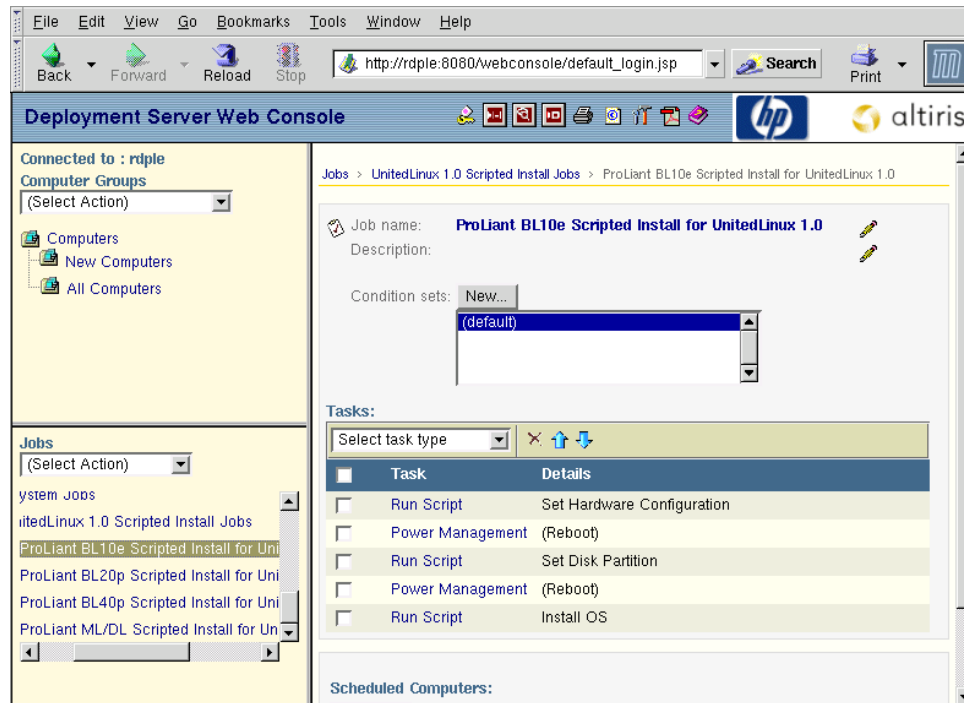
- Click **Apply** to save changes.
- Repeat steps 2 through 6 for any remaining Red Hat Linux scripted install jobs.

Preconfiguring Deployment Settings for UnitedLinux Scripted Install Jobs

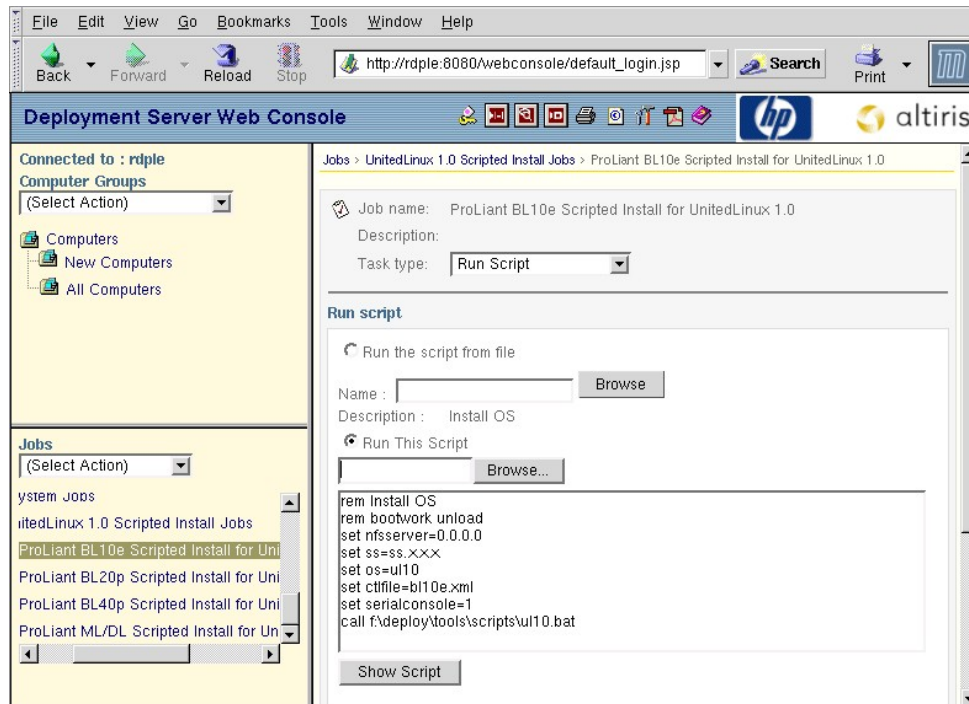
For the UnitedLinux scripted install jobs to operate properly, they must be modified with the host and domain name or IP address of the NFS server where the installation files are located.

To update each UnitedLinux scripted install job to point to the NFS server:

1. Locate the UnitedLinux scripted install jobs to be modified within the Deployment Server Console. Expand the tree view, if necessary, to view the jobs in the Jobs pane.
2. Click the job. The job properties information appears in the Details pane.



- Click the last **Run Script** link of the Install OS – Run Script task. The run script properties information appears in the Details pane.



- Locate the following line in the script:

```
set nfsserver=0.0.0.0
```

- Change 0.0.0.0 to the host and domain name of the NFS server as follows:

```
set nfsserver=yournfssvr.yourdomain
```

where *yournfssvr* is the host name of the NFS server and *yourdomain* is the domain name of the NFS server.

Instead of a host name and domain name, an IP address can be specified as follows:

```
set nfsserver=xxx.xxx.xxx.xxx
```

where *xxx.xxx.xxx.xxx* is the fixed IP address of the NFS server.

NOTE: Using the IP address to connect to the NFS server is more effective than using a DNS name because using a DNS name requires the existence of a DNS server properly configured with an entry for the NFS server.

- Click **Apply** to save changes.
- Repeat steps 2 through 6 for any remaining UnitedLinux scripted install jobs.

Manually Installing Red Hat Enterprise Linux Boot Files

If you did not copy the Red Hat Enterprise Linux boot files during the installation, manually copy those files for each omitted distribution to ensure that the provided Red Hat Enterprise Linux jobs operate properly.

NOTE: Linux boot files for all other Linux distributions are provided on the Rapid Deployment Pack CD and installed during the ProLiant Integration Module for Linux Deployment Server installation.

To manually copy the Red Hat Enterprise Linux boot files to the Deployment Server directory:

1. Locate the `/opt/altiris/deployment/adlserver/deploy/cds/compaq/ss.xxx/yyyy` directory on the Deployment Server, where `xxx` is the ProLiant Support Pack version and `yyyy` is the Linux distribution shortcut name for the files to be copied.

Table A-1: Linux Distribution Shortcut Names

Linux Distribution	Distribution Shortcut Name
Red Hat Enterprise Linux AS 2.1	rhas21
Red Hat Enterprise Linux ES 2.1	rhes21
Red Hat Enterprise Linux AS 3	rhas3
Red Hat Enterprise Linux ES 3	rhes3

IMPORTANT: The copied boot files must match the distribution version copied during the ProLiant Integration Module for NFS Server installation or the manual installation of Linux distribution CDs.

2. Insert the first distribution CD into the Deployment Server CD-ROM drive.
3. Mount the CD-ROM drive:

```
mount /mnt/cdrom (Red Hat)
or
mount /media/cdrom (UnitedLinux)
```

4. Copy the following files into the Deployment Server directory from Red Hat Linux CD #1 as shown in Table A-2.

Table A-2: File Sources and Destinations

Source	Destination
/dosutils/loadlin.exe*	/opt/altiris/deployment/adlserver/deploy/cds/compaq/ss.xxx/yyyy/ dosutils/loadlin.exe
/images/pxeboot/vmlinuz	/opt/altiris/deployment/adlserver/deploy/cds/compaq/ss.xxx/yyyy/ dosutils/autoboot/vmlinuz
For rhas21 and rhes21: /images/pxeboot/ initrd-everything.img**	/opt/altiris/deployment/adlserver/deploy/cds/compaq/ss.xxx/yyyy/ dosutils/autoboot/initrd.img
For rhas3 and rhes3: /images/pxeboot/initrd.img	
* For Red Hat Enterprise Linux 3 Update 1, the loadlin.exe file has already been copied to the destination directory.	
** Rename the copied initrd-everything.img file to initrd.img.	

5. Unmount the CD-ROM drive:

```
umount /mnt/cdrom (Red Hat)
or
umount /media/cdrom (UnitedLinux)
```

Manually Installing Linux Distribution CDs

If you did not copy the Linux distribution CDs during installation, manually copy the files for each omitted distribution to ensure that the provided Linux jobs operate properly.

To manually copy a set of Linux distribution CDs to the NFS server directory:

1. Locate the `/usr/cpqrdp/yyyy` directory on the NFS server, where `yyyy` is the Linux distribution shortcut name for the omitted distribution.

Table B-1: Linux Distribution Shortcut Names

Linux Distribution	Distribution Shortcut Name
Red Hat Enterprise Linux AS 2.1	rhas21
Red Hat Enterprise Linux ES 2.1	rhes21
Red Hat Enterprise Linux AS 3	rhas3
Red Hat Enterprise Linux ES 3	rhes3
Red Hat 7.3	rh73
Red Hat 8.0 Professional	rh80

IMPORTANT: The copied Red Hat Enterprise Linux distribution files must match the boot files version copied during the ProLiant Integration Module for Linux Deployment Server installation or the manual installation of Red Hat Enterprise Linux boot files.

NOTE: UnitedLinux distribution files cannot be manually copied. These files must be installed during the ProLiant Integration Module for NFS Server installation.

2. Insert the first distribution CD into the NFS server CD-ROM drive.
3. Mount the CD-ROM drive:

```
mount /mnt/cdrom (Red Hat)
```

or

```
mount /media/cdrom (UnitedLinux)
```

4. Copy the contents of the distribution CD, including subdirectories, to the distribution directory. For example:

```
cp -r /mnt/cdrom/* /usr/cpqrdp/rhas21
```

5. Unmount the CD-ROM drive:

```
umount /mnt/cdrom (Red Hat)
```

or

```
umount /media/cdrom (UnitedLinux)
```

6. Repeat steps 2 through 5 to copy the remaining CDs in the distribution set to the distribution directory.

The distribution CDs containing the RedHat/RPMS directory and (for Red Hat Enterprise Linux 3 Update 1 only) the Red Hat/Updates directory are required. However, all distribution CDs in the set might not be needed.

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